

# THE CULTIVATOR,

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

"AGRICULTURE, AT ONCE THE CAUSE AND EVIDENCE OF CIVILIZATION."

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## The Cultivator.

WILLIS GAYLORD & LUTHER TUCKER, EDITORS.

### INTRODUCTORY.

In assuming the editorial charge of the united Genesee Farmer and Cultivator, it may perhaps be expected that we should enter into some explanation of the views we entertain of agriculture and its importance, the best means of advancing it, and the principles we intend as editors to illustrate and follow. Were our readers to be only the numerous body of farmers and others who have accompanied us in our course as conductors of the Farmer, we should consider a simple reference to the volumes of that periodical as a sufficient exposition of the opinions we entertain; but as this paper will fall into the hands of thousands who were not readers of that paper, common courtesy demands that some brief intimations of what we intend shall here be presented.

In taking charge of the new series of a journal heretofore conducted with such distinguished ability, we feel that in the new connection a double responsibility is resting upon us. The admirable editorial tact, the great practical experience, the extensive and varied information, and deserved personal popularity of the late lamented conductor of the Cultivator, gave him advantages we shall not pretend to claim; and which can only be compensated on our part by untiring industry, and a faithful use of the ample and varied sources of information within our reach.

The great truth that the true source of all wealth lies in productive industry, is beginning to enforce the assent which it should long since have freely received; and the events of the last few months, both in this country and in Europe, have demonstrated that of all the branches of industry, there is none with which the prosperity of nations is so intimately connected, and on which it is so dependent, as our agriculture. The failure of a year's crop in Great Britain, has deranged the monetary and commercial relations of the globe, and has influenced the condition and prosperity of different and widely separated countries, more than would years of war. With the advance of civilization, it is seen that agriculture is destined to perform a more influential part in determining the destinies of nations, than it has hitherto done, and its importance is becoming better understood and its wide spread agencies better appreciated in the mind of every intelligent man, be he statesman or financier.

With a conviction of the value of any cause, or the importance of any object, comes the inquiry as to the best manner of advancing that cause, or promoting that object. There was formerly a wide spread but evidently mistaken notion (arising from the feudal state of Europe, and designed to perpetuate a system in which the tiller was little better than an adscript of the soil,) which maintained that knowledge was useless to the farmer; that science could do nothing for agriculture; that books could teach nothing to interest or instruct him; but that he must be left to plod on his way by instinct, or parrot-like, by repeating operations he had seen performed by his father, without change or hope of improvement. Fortunately for mankind, this feeling and state of things has, in the main, ceased to exist. In all civilized countries, the cultivator is rapidly becoming the owner of the soil; with the possession of property, inquiry is awakened, information is demanded, experience is consulted, nature is interrogated, and her responses listened to and obeyed; science is invited to the aid of the farmer, and discloses the reasons of a multitude of processes which were formerly involved in impenetrable mystery; and with the acquisition of knowledge, agriculture and its professors have taken a position among mankind which has made the cultivation of the soil one of the most honorable, as it is one of the most useful and lucrative employments of man. To press forward these desirable results, associated power has been most beneficially exerted, and Agricultural Societies, Schools, Books, and Periodicals have united their efforts with the best effect. While all of these have been useful, while all have done much to awaken inquiry, promote investigation, and disseminate truth, it is not perhaps unduly magnifying our own office to say, that in no way has agriculture received more effectual aid than by the circulation of well conducted periodicals, devoted to the interests of the farmer, and furnishing him

a record of the facts and theories that experience and science are daily bringing to light, as having a direct bearing on the cultivation of the soil. In the same way and by an extended use of the same means, must farther advances be made. The diffusion of knowledge, convertible to practical uses, is what we need, and in no country is knowledge of every kind so essential to the farmer as in this. All power being in his hands, he may be justly held responsible for every thing; and duty to himself and the world demands that he should avail himself of every possible means of qualifying himself for the position in which he is placed by the institutions of the land, and the path which destiny appears to have marked out for his advance.

In all our exertions as conductors of an agricultural journal, to promote the interests of the farmer, the first place, as of right, will be given to the practice of agriculture. Without any disposition to underrate investigations more purely theoretical, we consider a correct practice, based on well grounded principles, to be the great end of all agricultural teaching; and its inculcation the proper business of an agricultural journal. Multitudes of theories that appeared beautiful and promising in the study, have been found illusory and unsatisfactory in the field; a result not to be wondered at, when we remember that of the great number of causes that go to produce a given or desired effect, it is very probable some of the most important are, in the present state of our knowledge, unknown, or overlooked. But though we thus assign the first place to practical agriculture, we are by no means disposed to undervalue its theory. Every person who has paid attention to the progress of agriculture for the last twenty or thirty years, is aware that many of the greatest benefits science has conferred on the farmer, have been the result of pure theory, a reasoning from cause to effect, making certain what was before doubtful, and enabling the farmer to co-operate effectually with nature in the amelioration of the soil or in the production of crops. In short, we intend the Cultivator shall be a repository of every fact, both practical and theoretical, that can aid and enlighten the tiller of the soil, that will promote investigation or dissipate error, elevate the mind, strengthen the understanding, develop the laws of nature, and enforce a rational, and of course, successful system of husbandry.

In carrying out our intentions, as conductors of the Cultivator, we invite the cordial co-operation of those friends of the farming interest, whose communications have given such interest and value to the columns of the Farmer and the Cultivator. Few are the individuals who are not able to contribute facts calculated to elucidate and establish some point of practical importance, aid in correcting some long cherished error, or suggesting some useful matter of inquiry. It was a maxim with Peter the Great, that "nothing is little to a truly great mind;" and the discoverer of an agricultural truth, which enables a farmer to grow "two spires of grass where but one grew before," must be considered a benefactor of mankind, no less truly, and perhaps more beneficially, than he who develops the theory of the universe.

### To Correspondents.

The proprietors of the Cultivator desire to present their acknowledgments to the correspondents of the paper for the various evidences of their continued regard to the cause of agriculture that will be found in this number. Coming as they do, from contributors to the papers, the union of which has produced the present journal, these essays are considered as proof that the proceeding is viewed with approbation, and that in our endeavors to be useful in the great cause of agriculture, we shall receive their continued countenance and support. We have a number of valuable papers, which shall receive an early insertion; and we hope our friends, to whom we are already so much obliged, will still forward us the results of their observation or their experience.

We also beg leave to tender our gratitude to our friends for the numerous expressions of kind wishes and encouragement we have received from various and distant sources. The approbation of the intelligent, is one of the most welcome remunerations those who labor for the public good can receive, as a decisive proof that their efforts are appreciated and understood. This confidence, and this encouragement, it shall be our endeavor still to deserve.

### Back Volumes of the Cultivator.

All the published volumes of the Cultivator can be furnished to new subscribers. The price is, for vols. 1, 2, 3 and 4, 50 cents each—vols. 5 and 6, \$1.00 each.—They are handsomely done up in printed covers, and can be sent by mail at the expense of newspaper postage, viz: 12 cents per vol. if within the state, or within 100 miles of Albany, and 18 cents if over that distance and without the state.

### Annual Agricultural Meetings.

The New-York State Agricultural Society, and the New-York State Agricultural Convention, are both to meet in Albany on the FIRST TUESDAY OF FEBRUARY, 1840. The members and delegates are requested to meet at the City Hotel, at 11 o'clock, A. M., from which they will adjourn to a place which will be provided for the public meetings.

Editors throughout the state are requested to copy the above.

In connection with this notice, we are requested to remind the members of the different committees that were appointed last winter to report on the particular subjects assigned them, that much of the interest of the ensuing meetings will depend upon the fulfilment of their duties, and it is confidently expected that there will be no disappointment in this respect. It is to be hoped, also, that the friends of agricultural improvement in the different counties will take measures to be represented in the Convention.

### New Terms to Agents.

It will be seen by reference to the "Terms" in their appropriate place, that an alteration has been made in the conditions of the Cultivator, highly favorable to Agents, and to all in fact, who are disposed to promote its circulation by their personal efforts, viz: to allow every sixth copy gratis, instead of the eleventh, as heretofore; and a commission of twenty per cent on twenty-five or more subscribers, and twenty-five per cent on one hundred or more. We make these liberal allowances in the belief that it will induce our friends to make greater exertions to extend the circulation of the Cultivator, as there can, we should think, be but few neighborhoods where any one who is disposed to act as Agent, may not obtain subscribers enough to receive a copy gratis.

### Advertising.

So general has been the complaint against the admission of advertisements into the Cultivator, that we are compelled to decline their insertion in the present volume. We had thought of issuing a quarterly advertising sheet, but we find that to make it pay its cost, for our large edition, we should have to charge at the rate of \$12 a column, which would be more than most advertisers would be willing to pay. We think it best, therefore, to leave the advertising business to papers of a more local and less permanent character. Believing however, that it will be a benefit to our subscribers, we shall cheerfully, when desired, publish the address of such of our correspondents and agents as are engaged in the seed or nursery business, dealers in improved stocks, agricultural implements, &c.

The publication of the last No. of the 6th volume of the Cultivator has been delayed for an engraved portrait of its late editor, Judge BUEL, which the engraver has just finished. It will, however, probably occupy some two or three weeks to print copies enough to supply all the subscribers. The papers will be sent out as fast as the portraits can be printed. The No., which consists of a sheet and a half, will also be accompanied by a beautiful wood cut, of nearly the size of a page, representing the HORTICULTURIST'S COAT OF ARMS, devised by A. Walsh, Esq., of Lansingburgh, and exhibited at the Horticultural Fair at Niblo's Garden, New-York, in October last.

### District School Library.

In the December No. of the Farmer, the publication and contents of the second part of the School District Library, published by the Messrs. Harper, was noticed by us. We have since had the pleasure of examining such of the volumes as we were not before acquainted with, and can recommend the whole as a most valuable selection, and worthy the entire confidence and approval of the public. The fact that time was required for the preparation and publication of as many volumes as is demanded by the district Library system, is fully proved by the manifest superiority of this second series over the first.

The excellent volumes on Agriculture, furnished by Judge Buel, with the one on the same subject by General Armstrong, with notes by Judge Buel, and the invaluable work of Chaptal on the Chemistry of Agriculture, are sufficient of themselves to give a character of usefulness and adaptation to the series, not possessed by the former, nor indeed by any other yet presented to the public. In addition to these, the Life of Franklin, whose name is more closely identified with the political economy of the country than any other; the volumes of American Biography, by Mr. Sparks and other able writers; the Universal History of Tytler; the Personal Narrative of Humboldt, the most instructive of travelers, &c., are volumes of the best kind, and cannot fail to give satisfaction to all. Next to the establishment of our common school system, we consider the most important step that

has been taken towards a general diffusion of sound and useful information among the great mass of the people, has been the appropriation for the District School Library; and it can scarcely fail of producing the happiest effect, in every district of our state, except through the unpardonable remissness and negligence of those who are necessarily entrusted with the carrying out the liberal and praiseworthy designs of its projectors. It may not be improper to add here, that those individuals whose means of forming private libraries are limited, will probably find the series published by the Messrs. Harper as comprehensive and valuable, and certainly as reasonable in price, as any collection of a similar miscellaneous nature that could be made.

#### Means of Improvement in Agriculture.

That farmers at the present time have within their power the means for a more rapid advance in their profession than was enjoyed by those of fifty years since, is perfectly plain to all. The object of this paper is not to establish this fact, but by the enumeration of some of the means within our reach, to enable us to decide whether we avail ourselves of them to the extent that we might and should, were their importance properly appreciated. The age in which we live is one of movement; and though farmers, as a class, are the last to be infected with the spirit of change and innovation, it would have been surprising indeed had this honorable employment of so large a portion of mankind been suffered to rest without availing itself of the benefits which science and experience have furnished. The grand fact that the earth, through the operations of the farmer principally, is the great source of wealth, had long been overlooked; and when, by progressive advancement in civilization this truth was understood, it was at once obvious, that to foster and encourage agriculture was a paramount interest of society. With a knowledge of the necessity of agriculture to the increase of wealth, it began to assume a place in the estimation of the community, to which, however justly entitled, it might formerly have looked in vain, as no such claim would for a moment have been allowed.

The application of science to agriculture was one of the first benefits which the business of the farmer received from a proper estimate of his employment. Formerly the farmer was compelled to plod on in an unvaried routine, he being presumed to understand by nature or by instinct all that was necessary for the cultivation of the soil to know. The reasons for the processes he employed; the cause of the various phenomena of animal and vegetable nature; the why and wherefore of the changes continually going on before him, and for the observation of which no man is more favorably situated than the farmer, were held to be beyond the acquisition of the occupier of the soil, not easily understood, and useless if known. Science placed her torch in the hands of such men as Davy and Chaptal, and its light dispelled this delusion. Chemistry, by its powers of analysis, showed the nature and composition of soils; the proper kind, time and value of the several varieties of manures; the mode and the means of nutrition; and with the knowledge of these came the power of supplying wants where they were found, and correcting deficiencies where they existed. We do not mean to say that manures were not applied to soils and good crops occasionally raised before the investigation of science had been directed to agriculture, but the whole business was one of uncertainty, and must always have remained so, had not the causes that produced these favorable results been shown, and the means of repeating them at pleasure placed in the hands of the tiller of the soil.

While the public mind was thus awakening, and science was beginning to lend her aid; men of inquiring minds, practical farmers, commenced a series of experiments, which, embracing in its advance the whole circle of agriculture, and continued with increasing zeal till the present time, has afforded the greatest benefits, and placed within reach of the farmer one of the surest means of unlimited improvement. Well conducted experiments, that is, experiments based on a knowledge of the ends to be obtained and the surest means of arriving at them, now constitute the most effectual means of advancing agriculture; and in every country are to be found men who are engaged in carrying them forward with a success that equals every reasonable anticipation. That every man who owns, or tills the soil, should engage in what may be termed experimental farming, is not to be expected or perhaps desired, though there is no one who must not at times feel the necessity of adopting new modes of culture, or who may not have experienced the benefit of doing so. A greater degree of attention and care than can be usually bestowed by the common farmer, is required to conduct experiments to useful conclusions, though as observers of facts, they can render the most essential aid to those who have means and leisure to attend to more strict investigations. In the accumulation of recorded facts, the result of those continued and multiplied experiments, the modern farmer has a means of advance already given him, of the greatest consequence.

A better understanding of the laws that regulate the improvement in the breeds of animals, and the increased productiveness of plants, have furnished one of the most efficient means of advance as well as of profit. It has been stated as the result of this attention to breeding animals, that the average weight of the cattle slaughtered in London, or sold at the Smithfield market, has increased full one-third in fifty years, and that the difference in the mutton is not less than in that of beef. A house in

Boston, that has for a number of years slaughtered the number of five or six thousand head of cattle annually, state that the increase in weight for the last twelve years, has amounted to ten or twelve per cent; and as the average weight of the animals is about 900 pounds, there has been of course an average gain of about 100 pounds on each animal within the time stated. These facts are sufficient to prove the immense importance to the farmer of improvement in stock, and show him the way in which still further advances may be made. Nor has the improved state of quality and quantity of the grain grown at the present day been scarcely less decided than that we have noticed in beef. Forty bushels of wheat, and one hundred bushels of corn, to the acre, are as common now as thirty of the first or eighty of the last were but a few years since; and the fact of such crops not being oftener produced, does not militate against the theory of improvement; it only establishes the truth that the farmer is too slow in seeking the means of advance in agriculture, or negligent in availing himself of them when pointed out.

The great advances in the mechanical arts, by producing more perfect implements of agriculture, and enabling men of genius to carry out their plans in constructing new machines, have added further facilities to improvement, and means, which fifty years since could not have been found, are now every where at command.—Thus we have only to look at our light, beautiful, easy working cast iron ploughs, and compare them with the heavy, unwieldy, ill looking and worse working ploughs of our predecessors, to realize in part the difference that exists between the former and the present times in this important implement. The superiority of the hoe, fork in all its varieties, scythe, cradle and rake, is not less manifest. The horse-rake, by which one man performs the work of a dozen; the drill, so indispensable in the cultivation of roots; the reaping machine, by which the grain is cut, threshed, cleaned and delivered in the field fit for the miller; the cultivator, by which the labor of hoeing and dressing corn and root crops is reduced at least one half; the roller, so necessary to good husbandry, and in short the multitude of improved implements now in use, but which a short time since were unknown, furnish undeniable proof of the increased means of progress the farmer at the present time possesses.

Agricultural societies have been found among the most efficient agents in promoting agriculture, and at the present day they are constantly increasing in number, activity and consequent usefulness. The grand principle of association for the accomplishment of great objects, has received no better proof of its potency than is given by the history of some of the oldest of these societies. Agricultural societies bring farmers into a beneficial acquaintance with each other; they teach the best methods of accomplishing the several processes of farming; they bring to the knowledge of the many the most valuable plants, the choicest animals, and the most approved implements. They stimulate inquiry, they invite discussion, they reward care and research; and at the meeting of these societies, the bands of brotherhood, and a strong feeling of attachment to the pursuits of the farmer, naturally arising out of a congeniality of interest, are created or materially strengthened. From these associations, and the undisputed benefits found to arise from such communications and interchanges of opinion, in regard to agriculture, may be said to have originated another and most important auxiliary in the cause of the farmer, which, as a means of improvement, is second to no other; one which may be said to belong almost exclusively to the present age; one which already exercises, and which must continue to exercise, a boundless influence on the cause of agriculture. We allude of course to the Agricultural Press.

Other classes of men had long employed the press to advance their claims, enforce their rights, disseminate a knowledge of their principles, promulgate their views, diffuse necessary information, and serve as a kind of chain to bind the scattered members of the pursuit or profession into a community of interest and feeling.—The agriculturist long neglected this obvious means of improvement; and in this case, as in many others, while he cared not for himself no one cared for him. There seemed a tacit understanding among most of those in other pursuits and professions, that knowledge was not necessary to a farmer—that all the information he requires comes by instinct—that science could do nothing in aid of the tiller of the soil; and in this disposition of matters the farmer for a long while seemed patiently to acquiesce. At last came inquiry, and with it the desire for information; the experience of others was sought, and when obtained there was no rest till the "whys and because" were also given. Books could not circulate extensively or rapidly enough to meet the demand for agricultural knowledge; the sneer, once so powerful against book farming, was disregarded; facts demonstrated the utility of science in farming as well as in other pursuits; the necessity of mediums of communication between farmers became apparent, and the periodical agricultural press had its origin. That well conducted agricultural publications are the most efficient means of promoting good husbandry in a country, will scarcely be questioned by one who has watched their operation, or noticed the change in the agricultural state of the country that has taken place since their introduction. To be without the receipt of one or more periodicals of this kind, is a practical admission by the farmer that he is behind the age, and that his system of culture is of an old fashioned and inferior kind, and an examination of his farm and its products, will be found un-

ally to confirm the impression. A paper which gives monthly a history of the opinions, or details the results of the experience of hundreds of the ablest, best informed, and most successful farmers of the country, cannot fail to interest and instruct. Where is the agriculturist that would not esteem it a privilege to spend an evening with any half dozen of these, and listen to their opinions or their facts; and this privilege a well conducted and well supported paper will give him monthly, and allow him at the same time to change the conversation and the speakers as it were, at his own pleasure. Of all the means which the intelligence, experience and genius of the age has invented or introduced for the aid of agriculture, there is none more effectual, less expensive or more decided, than agricultural journals.

Agricultural schools deserve, and would have received a prominent place in this notice of the means within the reach of the farmer to advance his interests, but the subject has been so ably treated in a late number of this paper, that further remark would seem to be superfluous. The experience of France, Prussia, England and Ireland, demonstrate their utility; the testimony of Fellenberg, Von Thier, Dombasle, Youatt, Farday, and a host of other distinguished men, is decisive in their favor; and we shall hail it as a proud day for the agriculture of our country, when such schools, either by public or private maintenance, shall be established among us.

#### Notices of Agricultural Societies.

No more decisive evidence can be offered that agriculture, in its effects and consequences, is beginning to be better appreciated and understood, and the best means of advancing it more fully realized, in our country, than the numerous accounts of the formation and proceedings of new associations that reach us from all parts of the country. Resulting, as these societies do, from a full conviction of their usefulness; rising in the midst of our agricultural population, by a spontaneous, and, in many instances, a simultaneous movement, without the influence of foreign aid or other exciting causes; we have good reason to hope they will, many of them at least, be permanent, and do much towards the diffusion of correct agricultural information, and sound and judicious agricultural practice. We should be gratified to enter into the details presented by the reports of some of these meetings that have reached us, and give to our readers some of the excellent addresses these occasions have called forth. Our limits, however, forbid, and we must be content with such limited notices as our space permits.

We learn from the Onondaga county papers, that the agricultural society of that county held its first cattle show and fair at Syracuse, on the 17th day of October. There was a very respectable display of stock of various kinds, embracing cattle, horses, sheep and swine; of the productions of the earth, such as wheat, potatoes, &c. &c., and a spirit was manifested by the numerous company of farmers present, which argues well for the further efforts of the society. In its position and resources, Onondaga is perhaps second to no other county in the state, New-York excepted; and her farmers have the means and we hope the inclination to render that society one of the most prosperous and efficient in the country. We may add here, as a fact much to their honor, that the conductors of the principal political journals of that county, take an active part in the cause of the agriculturist, and co-operate efficiently with the journals devoted to the farmer, in spreading the most important facts and papers that appear before their readers. The good effect of this proceeding is apparent, and we mention it here as a hint to journalists in agricultural districts, that they may in this way render a most important service to the productive interests of the country.

The able address before the Agricultural Society of Seneca County, by Mr. Strong, is now before us. The journal containing the other proceedings of the association has been mislaid, but they were of the most encouraging order, and promise much for that rich and fertile region. We copy from the address the following paragraph, as it contains important truth well and forcibly expressed:

"To understand what the true process for renovating an exhausted soil is, requires a knowledge as comprehensive almost as the world of science itself. All the efforts and investigations which have been applied to this study, go far to establish this truth; yet how difficult it is suitably to impress this fact upon the minds of the farming population generally! Able and enlightened men have labored, and are now laboring with their pens and influence, to imbue our minds with a deep sense of its truth and importance. Experiments have been made and their results minutely detailed, so that we are without excuse if we have not profited thereby. Yet farmers too rarely heed these lessons of wisdom and experience. We seem to prefer to follow on in the footsteps of our respective predecessors, in the same modes of tillage and husbandry which they practised, without stopping to inquire whether there is any thing to learn by departing from them. In this we greatly err; we misapply the lessons which experience in other departments of industry so emphatically teaches in the great improvements and inventions of modern times. Man's knowledge and usefulness increase in proportion to those expansive energies which direct and control his thoughts and investigations of subjects especially within the province of his vocation. This is an undisputed axiom, and how forcibly should it address itself to the farmer! No matter how much success may have accompanied his patient toil, or in what abundance the blessings and comforts of life may lie scattered along his pathway, (for these do more generally attend the faithful and industrious cultivator of the soil than almost any other pursuit or occupation,) he is still without excuse if he has allowed his mind to grope



and grovel along, without an effort to become enlightened in the great principles of agricultural science."

Of all the associations that have been organized the present season, however, the reports of which have fallen under our notice, none seem to have originated under more favorable auspices, to have been conducted with more spirit and intelligence, marked by a greater degree of liberality, or placed in a position to warrant the expectation of a wider usefulness, than the Agricultural Society of Cuyahoga County, Ohio, which held its first meeting, cattle show and fair, at Cleveland, on the 30th and 31st of October last.

Committees on the subjects of farms, horticulture, silk and mulberry, agriculture, domestic manufactures, and animals, consisting of spirited and influential gentlemen, had been previously appointed to examine the district, and interesting reports on all the subjects named, were made to the meeting.

The premium on farms, \$50, was awarded to S. Giddings, of Cleveland, and by that gentleman was immediately presented to the society in aid of their funds. The southern shore of Lake Erie has long been celebrated for its fine fruit; and the report on horticulture furnishes proof that for strawberries, gooseberries, raspberries and grapes, in addition to the more common productions of the garden and orchard, it may become equally celebrated. A number of lots of mulberry were examined, and of these, and the few attempts at the making of silk, (principally thread,) the report speaks in the most favorable terms. The report on agriculture cannot be considered as exhibiting a state of things altogether satisfactory; but the pointing out of defects in a system, and the announcement of remedies, can hardly fail, in an enterprising and intelligent community, of producing the happiest effects. From this report we take the following account of a field of corn raised by Mr. Sherman of Mayfield, and which received the first premium. Two acres were offered. The land a black ash swale without manure, planted four feet each way, labor performed as follows:

Plowing two acres, 2 days with team,.....	\$4 00
Planting do 2 days,.....	1 50
Hoeing first time, 4 days,.....	3 00
do second time, 3 days,.....	2 25
do third time, 3 days,.....	2 25
Harvesting, 4 days,.....	3 00
Cutting and shocking, 2 days,.....	1 50
	<b>\$17 50</b>

#### Credit.

By 182 bushels, 22 quarts of corn, at 50 cents per bushel,.....	\$91 00
Corn fodder,.....	8 00
16 loads of pumpkins,.....	8 00
	<b>\$107 00</b>
	<b>17 50</b>

Nett profit,..... **\$89 50**

Of other crops that received the premiums of the society, was one of potatoes, 432 bushels per acre; of carrots, one at the rate of 853 bushels per acre; ruta bage, 972 bushels per acre; sugar beet, 928 bushels per acre. The wheat crops that received the premiums, were two of two acres each, of which the first produced by weight, 103 bushels, 44 lbs.; and the second, 112 bushels, or 56 bushels per acre. If there are many such crops produced in Ohio, we shall cease to wonder it is becoming famous for its wheat. Of domestic manufactures a great variety of useful and beautiful articles were exhibited, many of which were from the hands of fair contributors, and were alike honorable to them and the occasion. The report on animals, speaks in warm terms of the efforts made by the spirited farmers of Ohio to improve their domestic animals, and the great success which has attended their exertions. Ohio has set a most commendable example in this respect, and she is already reaping a rich reward for her labors.

The address was by the Hon. F. Whittlesey, and was precisely what was to be expected from his talents, general information and intelligent zeal in the cause of agriculture. The views presented by Mr. W. are such as must commend themselves to the mind of every intelligent man, to every one that has reflected on the relation the agriculture of every country bears to its prosperity, and the high rank to which it is entitled in the estimation of every true friend of the nation's welfare. His remarks on farming, both in its theory and its practice; the rules that govern the fertilization of the earth, and should govern the rotation of crops taken from it; the best methods of culture; the advantages of knowledge, and the circulation of agricultural information; and the necessity of paying particular attention to the choice of animals for breeding, and seeds for planting; are eminently appropriate and well timed, and prove that to the consideration of the subject, had been brought the resources of a well disciplined mind, conversant alike with the theory and the practice of agriculture.

Every person conversant with agriculture in this country, is aware that strong objections have been made by a certain class to the importation of animals, alleging that we have among ourselves, and of our native breeds, as valuable animals as can be imported. For the sake of the argument this may be admitted; but have we any evidence that these animals will produce others like themselves? On the contrary, have we not the most conclusive evidence that these valuable qualities are in

these animals accidental,—that they do not belong to the constitution or type of the breed, and therefore their continuance in the progeny cannot be counted upon with any degree of certainty. Now in the thorough bred imported animals, we have a stock that by long and skillful breeding have been brought to such a point that these valuable qualities are constitutional, they belong to the type, and we can count with safety on the certainty that the progeny will retain the good qualities of their parents. By abandoning thorough bred animals for our native ones, therefore, admitting that some of the latter can be found equal to the former, we throw away a certainty for an uncertainty, and voluntarily conclude to begin our improvements at a point some seventy or eighty years since, and from which, with infinite skill and perseverance, foreign farmers have in that time brought their several kinds of cattle, sheep and swine, to their present high standing and perfection. The only extract we have room to make from Mr. Whittlesey's able address, shall relate to this important topic.

"Many look with a jealous eye upon the stately Durhams, as aristocratic intruders upon ground of right belonging to the piebald, ringstreaked and speckled denizens of the soil. They won't bear starving, says one—and thinks himself highly favored in possessing cattle in whom the breath of life may be preserved by the least possible quantity of food. They give no adequate return it is true, either of milk, meat, or labor, but then they keep so easy. Another declares it treacherous to import cattle from a foreign country, and most of all from Old England, the land of our foe. Why not improve our own stock, if improvement must needs be the order of the day? Set about it then, and after a life-time has thus been spent, learn too late that a half century is still wanting to bring your improvement on an even keel with that you foolishly refused to profit by. Thank heaven, a different spirit is prevailing, and in a part at least of this community, as is evinced by the unwearied pains taken to introduce the very best kinds of stock among us. And our own Ohio, young as she is, is behind none of her sister states in this noble strife. The best description of every kind of stock is here, from Durham cattle, and the blood of old Eclipse, down to Berkshire hogs, and Leicester and South Down sheep. The farmer has only to choose, and in so doing he can scarcely go wrong, choose as he may. All, however, should recollect, whether foreign or native breeds be selected, whether unable or unwilling to change the stock already in possession, or both able and willing, that a prime requisite either for profit or pleasure is a full rack or manger. Keep no more than may be well kept, discarding every worthless animal the moment that fact is discovered, and a double advantage will ensue, for a creature well fed, sleek and smooth, is both a pleasure to the eye and a profit to the purse."

Situated as Cleveland is, at what may be called the northern gate of Ohio, located in a fertile district, and commanding an extensive trade, an agricultural society in such a position, conducted as the newly organized one evidently is, by able and spirited men, cannot fail by its example and its influence on the agricultural public, to produce the most beneficial results. We are confident we shall hear from this, as well as the other societies we have mentioned, again, and we trust under still more favorable auspices. Embarrassments growing out of a complication of causes which can scarcely again occur, have produced a depression in agricultural products; but this depression will pass away, as it is impossible to destroy the farmer's trade, while men will eat, and drink, and wear; or permanently depress an interest on which experience so conclusively shows all others are depending.

#### Statistics of Agriculture.

We are pleased to perceive that a suggestion of ours, made some time since, of the necessity of taking some measures to secure more ample and correct statistical accounts of the agricultural resources of this country, and the propriety of the government making such arrangements as shall secure this object at the time of taking the next census, or during the present year, has been adopted in substance by some of the soundest and most influential journals of the country, and advocated with an earnestness and ability which we hope will attract the attention of those servants of the public whose duty it is to manage affairs belonging to the general welfare. To take a record of our foreign trade, and preserve memorials of our indebtedness, requires an expenditure of millions annually; and an accurate collection of the items that belong to our agricultural wealth, cannot be objected to on the score of the trifling additional expense it may occasion, since the amount of the last year far exceeds that of the first; and so far as regards the actual increase of prosperity to the country, can admit of no comparison.

The fact, that to agriculture—to its spread and to its prosperity—we owe most of the increase in wealth, and consequent civilization and refinement, that marks the present age of the world, has become so obvious, that agricultural statistics are considered by every statesman as a kind of thermometer indicating most unerringly the advance or decline of a nation's prosperity. Hence the care which is taken to collect and register them, in all those states or nations where the true principles that regulate trade and productive industry are best understood.

The events of the last few years have forced on the public mind the necessity for this kind of knowledge. A monetary revulsion, preceded by changes and convulsions unexampled in the history of the world, seems to have originated and had its spread more from agricultural causes, and a want of knowledge of the actual state of productive industry throughout the world, than from any other. There can scarcely be a question, that had the actual quantity of grain grown in Great Bri-

tain last year, and the quantity of cotton and wheat produced in the United States for the same period, been well understood, the shock which the prosperity of both has received, might have been avoided. It would have been known that we have the surplus wheat, which an apprehended or actual deficiency has made necessary there, and the fear of which has aggravated ten fold the monetary difficulties under which the country was really laboring.

We wish to know the total value of the agricultural and productive industry of this country. Of the cotton we are able to give a tolerable estimate, since it is mostly sent from the country; but of the wheat, corn, rye, oats, barley, &c., of the cattle, horses, sheep, and swine, we know comparatively nothing. The immense amount that is produced by industry from our soils, or our fields, yearly, we are ignorant of, and must be until measures are taken to collect the scattered results, and show them in a vast whole. This can easily be done by the marshals and their deputies at the taking of the census. Every house and family will then be visited, and should the government adopt the suggestions the friends of the agricultural interest have proposed, blanks of the proper kind can be readily prepared, to which the information so collected can be transferred. Let it be once announced that the agricultural statistics of the country were to be collected; let the public once understand that inquiries on these topics were to be made and answered, all would be prepared, and the extra time consumed would be very limited. But let the additional expense be what it may, the public interest and the public voice, we think, demand that a full report of our agricultural statistics be made.

#### "The Farmer's Companion."

We are indebted to the publishers, Marsh, Capen, Lyon and Webb, for a copy of this valuable contribution to the stock of agricultural reading and information, presented to the American farming public by Judge Buell. The volume was prepared for the Massachusetts School Library Association, and will be found not one of the least acceptable of the volumes put forth by that enterprising body. The topics presented in the volume, belong to the most necessary and practical departments of farming, embracing all those things proper to a right understanding of the nature of soils, and the most efficient methods of culture, and given in that clear and accurate manner of detail, so peculiar to the lamented writer, of whom this volume was one of his latest labors.

The object of the volume will be understood by the following extract from the preface, and the intentions here shadowed out, have been amply fulfilled in the execution.

"The great objects of the farmer should be, to obtain the greatest returns for his labor, without deteriorating the fertility of the soil; and to restore fertility, in the most economical way, where it has been impaired or destroyed by bad husbandry. It has been my aim to give instruction upon these points, and to explain the principles upon which my recommendations are based, and upon which my individual practice has been founded."

We shall have frequent occasion to avail ourselves, for the profit of our readers, of the mass of interesting matter in this volume, and the others prepared by Judge Buell. The present publication contains, in addition to the Essays, the Address prepared to be delivered before the Agricultural and Horticultural Societies of New Haven, but which intention was prevented by the death of the writer, while on his journey to fulfil the appointment. It is clearly one of the ablest of those papers, which the acceptance of similar invitations had produced, and which have been the means of the delight and instruction of thousands.

#### Rocky Mountain Flax.

We know of no plant which seems to better deserve an effort for its introduction into the class of cultivated vegetation, than the one above named. The common flax plant is an annual; is exposed to the depredations of many insects; to get the full amount of the crop it is necessary it should be pulled, and yet with all these drawbacks it is a valuable crop, and indispensable for many purposes. If a plant possessing the same valuable qualities as the common flax, yet which would be perennial, and could be cradled or mown at maturity,—thus giving an annual succession of crops from the same root,—could be discovered and brought into use among us, and particularly in the fertile valleys and prairies of the western states, the advantages would certainly be very great. Such a plant is the Flax of the Rocky Mountains; and the individual or the society that shall introduce it into cultivation, should it answer present indications, will be considered as benefiting the agriculture of the country essentially. Of the various notices which we have seen of this plant, we select the following, as more particularly describing its appearance, and the extent of its growth in those regions.

Mr. Parker, in his excellent narrative of his journey across the Rocky Mountains, from the Mississippi to the Pacific, says, "Flax is a spontaneous production of this country. In every thing, except that it is perennial, it resembles the flax that is cultivated in the United States—the stalk, the bowl, the seed, the blue flower, closed in the day time, and open in the evening and morning. The Indians use it in making fishing nets. Fields of this flax might be managed by the husbandman in the same manner as meadows for hay. It would need to be mowed like grass; for the roots are too large, and run too deep in the earth, to be pulled as ours is; and an

advantage that this would have, is, that there would be a saving of ploughing and sowing." This was on a branch of Lewis or Snake river, of the Columbia.

In a late journal of a passage across these mountains, by Mr. Oakley, of Illinois, under date of the 21st of July, 1839, occurs the following: "Encamped to-night in a beautiful valley, called Bayou Selard, 28 miles from the head of the south fork of the Platte. It is a level prairie, thirty miles long and three wide, and was covered with a thick growth of flax, which every year springs up spontaneously."

Whether the Rocky Mountain flax will prove to be as near the common flax as is supposed by Mr. Parker, may be doubted; but that it is unlike, and far superior, to the two or three kinds of native wild flax that have before been discovered in the United States, would also seem to be clear. A tract of 90 square miles of flax, such as Mr. Oakley described, would be a sight in any country, and would rival the grass covered prairies of Illinois.

#### Bots.

Of all the insects that irritate and injure that noble animal the Horse, there is none perhaps more vexatious or more pernicious, in all its stages of existence, than the Bot. Its parent, the Horse or Gad-fly of the farmer, the *Estrus Equi* of the veterinarian, is common in the autumn, and it is then that the mischief which is performed by its method of perpetuating its species, is usually accomplished. The bot itself is the larvæ or caterpillar of the fly, and the manner of its introduction into the stomach of the horse, where it is to prepare for its final transformation, is a curious illustration of the means provided the insect to effect the end designed.

The male of the gad-fly is rarely observed, but the female, during the season it occupies in depositing its eggs, may be seen, with the extremity of its body turned under and forwards, busily engaged in darting up to certain places about the horse, and at every such movement attaching an egg to a hair, where it usually remains, ready, on the slightest application of the tongue of the animal, to throw open the lid or valve with which it is provided, and leave the minute bot or grub on the tongue, to find its way to the stomach of the horse with its drink or its food. Like many other insects of a similar class, no sooner has the fly deposited its eggs, than it either falls to the earth and dies, or slowly flies away to perish.

The time occupied by the egg in coming to maturity, is partly depending on the temperature, or its position on the animal; but it never exceeds a few days; and at times, the application of a moist warm hand will show they are ready for hatching in twenty-four hours.—When, by the action of the tongue, the grub has been removed into the stomach, it attaches itself to the insensible coat of that organ, by the two little hooks with which it will be seen the head is provided. Here it makes a small opening, into which its head or muzzle is plunged, and where it feeds on the juices or mucus which the stomach in that state affords. In this position it remains during the winter, and until the early part of summer, when it detaches itself, and mixing with the contents of the stomach, is voided with the excrementitious matter. As soon as it reaches the earth, it burrows at once beneath it, where it remains in the chrysalis state for a number of weeks, and then emerges a perfect fly, busily engaged in the propagation and perpetuation of its species. Such is the history of the common bot; the one that most frequently falls under the notice of the farmer, and is the most injurious to the animal.

Besides the above bot, there is another, called from its color the red bot. It is smaller than the common bot, and the fly which is its parent has never been satisfactorily described. It is generally considered more injurious than the common one, but probably without sufficient reason. There is still a third species, the *Estrus hemorrhoidalis*, or fundament bot, which makes its appearance within the anus and about the tail, the egg of which, it is ascertained, is deposited by a fly, while the intestine is partially developed in voiding the excrements. These bots occasionally produce a little irritation of the parts, but otherwise do not seem to produce injury. They are generally easily detached by the application of a little linseed oil.

Very discordant opinions are entertained among veterinarians, and among farmers, respecting the effects which the presence of bots in the stomach of the horse produces on the animal. Some contend that the bot is never injurious; that it never perforates the stomach of the living animal; that the deaths attributed to the bot, should be placed to the account of the colic; and that when the stomach is found perforated, as it frequently is, it is done by the insect in seeking to make its escape from the change that ensues after the death of the animal; and that, consequently, all the nostrums that have been prescribed for the dislodgment of the bot, are absurd if not positively injurious. An able and interesting discussion of this subject, was carried on in the 13th and 14th volumes of the American Farmer, between Dr. Harden, Mr. Ellis, and others, during which a mass of facts were adduced, proving that if death was not caused by the perforation of the stomach by the bot, it did cause death by choking up the passages leading to or from the stomach. This agrees with the statements of the best European writers on the diseases of the horse. Thus the Cyclopaedia issued by the Society for the Diffusion of Useful Knowledge, says, "In a few instances, the bot has been decidedly injurious; fastening themselves on the edges of the opening into the wind-

pipe, they have produced a cough, which no medicine could alleviate, and which, increasing with the growth of the bot, has ended in an irritation under which the animal has sunk. They have also travelled farther than the stomach, and have irritated and choked the first intestine, and thus destroyed the horse; and even in their natural habitation, under probably some diseased state of the stomach, arising from other causes, they have perforated it and caused death."

Mr. Youatt, in his work on the Horse, says the bot "cannot be removed by medicine, because they are not in that part of the stomach to which medicine is usually conveyed; and if they were, their mouths are too deeply buried in the mucous coat of the stomach, for any medicine that can safely be administered to affect them, and last of all, in due time they will detach themselves and come away."

That the most useless or pernicious methods are resorted to at times, for the removal of the bot, is evident to all who are acquainted with the treatment to which the horse is subjected in the hands of the ignorant. A correspondent in the last vol. of the Cultivator, mentions an instance in which a horse was cruelly killed by turning boiling water from a tea-kettle down his throat, to cure an attack of the bots. That no substance can be given as medicine, sufficiently powerful to destroy the bot, or make him let go his hold, that would not be fatal to the animal, is evident from the following table of experiments, which is copied from the Medical Register, and which were performed under the direction of Mr. Green. The bots were about two-thirds grown, were vigorous and active, and were exposed to the action of the several substances for the time stated.

Immersed in,	Lived hours.	min.
Rum,.....	25	00
Decoction of tobacco,.....	11	00
Strong elixir vitriol,.....	2	18
Essential oil of mint,.....	2	5
Volatile spirit,.....	0	56
Spirits of turpentine,.....	0	45
Decoction of pink root,.....	10	00
Fish oil,.....	10	00
Linseed oil,.....	10	00
Tincture of Aloes,.....	10	00
Brine,.....	10	00
Solution of indigo,.....	10	00

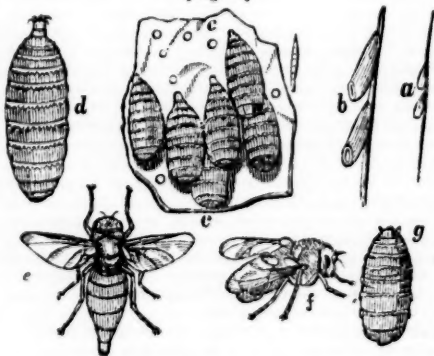
No effect.

Bots placed in a strong solution of camphor, and in one of corrosive sublimate, lived, in the first, till taken out ten hours afterwards, and in the last, six hours without injury. Strong vitriolic acid alone compelled them to let go their hold on the stomach, but this, as is well known, would be death to the horse, if administered.

From our experience, we are inclined to the opinion that in this case, as in many others, prevention is easier than to cure. If, during the few weeks the horse is exposed to the attacks of the gad-fly, the spots where the eggs are deposited were to be slowly rubbed with a cloth moistened in warm water, or even by the naked moist hand, so large a proportion of the young larvæ would be disengaged at every operation, that little danger or injury could ensue to the animal. Moisture and warmth are required to cause the insect to open his covering, and if this is applied in any other way than by the tongue of the animal, the larvæ is infallibly destroyed.

The cut (fig. 1.) with the accompanying description, copied from Mr. Youatt's great work on the Horse, will show the appearance of the insects in their several stages of existence, and the magnified eggs show the opening through which the worm is attached to the tongue of the horse in the process of licking.

[Fig. 1.]



- a and b, The eggs of the gad-fly, adhering to the hair of the horse.  
c, The appearance of the bots on the stomach, firmly adhering by their hooked mouths. The marks, or depressions, are seen, which are left on the coat of the stomach, when the bots are detached from their hold.  
d, The bot detached.  
e, The female of the gad-fly, of the horse, prepared to deposit her eggs.  
f, The gad-fly by which the red bots are produced.  
g, The smaller, or red bot.

#### Carbon of Plants—Use of Rotation.

All are aware that a large part of the substance of plants is carbon; the proportion varying from ten or fifteen to fifty-three or fifty-four. It is clear then that carbon forms the most important ingredient provided by nature for the nutrition or growth of plants, and the manner of its appropriation, and the source or sources

from which it is derived, become inquiries of the most important nature to the agriculturist. The experiments of Saussure and Davy, prove, that of charcoal, in its crude state, however fine it be made, or however intimately blended with the water furnished the plant, not a single particle is ever taken up, consequently this substance is only available in the shape of carbonic acid gas, when combined with water, or derived directly from the air, of which this substance forms a part. That carbon is absorbed by plants directly from the atmosphere, is proved by the beautiful experiments of Woodhouse, which have been repeated and verified by De Candolle, in which it is shown that plants perform a sort of respiration, during which air is decomposed, the oxygen being thrown off and the carbon retained for the use of the plant.

It seems generally to have been taken for granted that the carbon acquired by plants during their growth is derived from the earth, and that consequently the exhaustion of the soil will always be in direct proportion to the crops taken from it, or that no more actual weight of crops can be taken from a soil, than there is carbon existing in it at the time, or is applied in the form of manure. In consequence of this supposition, it has been laid down as an indisputable axiom by most agriculturists, and by none more strongly than by the justly celebrated Von Thaer, that "the exhaustion of the soil is proportional to the quantity of nutritive matter contained in the crops."

That this principle is not strictly correct, is obvious from the fact of the absorption of carbon from the air; but we are not aware that any statements of the proportion furnished by the earth, or by the air, have been made, or experiments instituted to determine this point, except those of M. Boussingault, an interesting account of which is given from the French in the Quarterly Journal of Agriculture. M. Boussingault's first experiments were to ascertain the correct principles on which a rotation of crops should be conducted, and it struck him at once that the few tons of farm yard manure applied per acre on the fallow ground at the commencement of the rotation, could not be sufficient of themselves, to cope with the weight of valuable matter, derived from the soil during the course of this rotation. This deficiency in the relations of apparent cause and effect, became more conspicuous, when it was remembered that at the expiration of a well conducted rotation, notwithstanding the amount of crops taken from the soil, the land was in a better condition, than when the rotation commenced.

In his remarks on rotation, M. Boussingault makes one assumption that cannot be admitted, and this is, that if the desired quantity of manure could always be obtained, the necessity for rotation would be done away with. The experience of many farmers shows that this assertion is defective. We are well aware that let us manure our lands as highly as we may, a crop of wheat for instance, cannot be profitably grown upon it for many years in succession. To the last, manure will produce a great growth of straw, but the berry will be wanting, and nothing but rest or rotation can prevent such a result, however liberal the use of manure. Skillful rotation establishes the rule by which the proper proportion of supply for each crop annually is ascertained, and by which uniformly good crops of the several kinds used in the course, can be maintained. Still as most of the substance that goes to the formation of the plant is derived from the soil, it is clearly necessary after each course to bestow upon it a good dressing of manure, to prevent its deterioration, and preserve it in a healthy productive state.

In order to determine how much of the carbon of the plants was derived from the soil, and how much from the air, M. Boussingault made his experiments with great care, on a considerable surface, and repeated them until all reasonable doubts of correctness were done away. His unit of surface is the hectare, which is to the acre as 2 : 1½. The result is almost always derived from a mean of six years. The dung employed was farm yard dung, half fermented; the unit of its bulk was a measure of which the weight had been found after numerous weighings to be 1818 kilogrammes of two lbs. three oz. each; (or 3976 lbs.). The grains, the straw, the roots, the tubers, were analyzed with the greatest care, each of those substances having been subjected to at least four analyses. Before being analyzed, all those substances were dried at a temperature of 230° of Fahrenheit, for a considerable time, and this is the course followed by M. Boussingault.

"Potatoes or red beet, dunged; wheat, clover, wheat, oats. It was found that in the dung consumed on the hectare, there were 2793 kilogrammes of carbon; in the suite of crops produced by this dung, the carbon was raised to 8383 kilogrammes. The weight of the carbon furnished in culture by the carbonic acid of the air was thus raised at least 5400 kilogrammes. In the same rotation, the azote primarily in the dung weighed 147 kilogrammes. In culture the weight of this article attained 251 kilogrammes, the atmosphere thus furnishing 94 kilogrammes of azote. In another very productive rotation the carbon of the crops surpassed the carbon of the dung by 7600 kilogrammes; and the azote in excess was as high as 163 kilogrammes."

In a three years rotation, the carbon taken from the air was 4358 kilogrammes, but the azote acquired did not exceed 17 kilogrammes. M. Boussingault adds, "the Jerusalem Artichoke is, of all the plants of which I can discuss the culture, that which draws most largely from the atmosphere. It is evidently alternate cropping and



rest, that gives the most nutritive matter with the least manure. No doubt to this circumstance must be attributed the extension which has taken place in the culture of this plant in the last 30 years. It may be seen in the following tables, that in two years the carbon taken from the air, from the surface of a hectare, rose to 13,237 kilogrammes, and the weight of azote over that contained in the dung was almost doubled."

These facts are interesting, as proving that water is decomposed during vegetation; that carbon is derived from the air as well as from the earth; and, what we believe had never before been satisfactorily established, that azote, one of the most important agents of animal nutrition, can be assimilated from the atmosphere by vegetables. Do they not also furnish an explanation of a system which has been found very satisfactory by some of our wheat growers, but which, on the commonly received principles of husbandry, would hardly seem to warrant the results which have flowed from it? A friend of ours who sows annually some fifty acres of wheat, has never drawn a load of manure upon much of his most productive wheat lands. He sows clover with his wheat, plasters his wheat and clover, and has a crop of wheat on the same fields every third year. He keeps some 300 sheep to pasture down his clover, but they are not put into the fields until a heavy growth is on the land. What they do not eat decays on the soil, and as the growth of clover is luxuriant, the matter returned to the earth in the shape of manure, decaying clover, and the vigorous roots when the fields are broken up for summer fallow, unquestionably exceeds in weight that of the wheat crop taken from the land. As a large part of the substance of the plants grown, both of the wheat and the clover, is derived from the atmosphere, as the above experiments of M. Boussingault demonstrate, (and the experience of every farmer would indicate,) there could be no good reason given why such a course should not continue to be productive, unless indeed the soil should have become exhausted of some of the principles required in the perfection of the wheat plant, to restore which, rest and a different succession of plants may be adopted; though in the example alluded to, no such necessity has yet appeared, the crops under the system indicating a decided improvement.

The following, selected from the tables of M. Boussingault, will be found interesting, as showing the proportion of the several elements alluded to, in the substances named in the table.

SUBSTANCES.	THEIR ASHES COMPOSED OF					
	Dry matter.	Water.	Carbon.	Hydrogen.	Oxygen.	Azote.
Wheat .....	0.855	0.145	46.1	0.5	8.4	0.2
Rye .....	0.834	0.166	46.2	0.5	8.4	0.2
Oats .....	0.792	0.208	50.7	0.6	4.3	0.2
Wheat straw .....	0.740	0.260	48.4	0.5	3.8	0.0
Rye straw .....	0.813	0.187	49.9	0.5	4.0	0.3
Oat straw .....	0.715	0.287	50.1	0.5	3.9	0.0
Potatoes .....	0.241	0.759	54.0	0.5	4.7	0.1
Field beet .....	0.122	0.878	42.8	0.5	4.3	0.1
Turneps .....	0.070	0.925	42.9	0.5	4.2	0.1
Jerusalem artichoke .....	0.208	0.392	43.3	0.5	4.3	0.1
Yellow pea .....	0.914	0.086	46.5	0.6	4.0	0.3
Pea straw .....	0.882	0.118	45.8	0.5	3.5	0.2
Red clover hay .....	0.792	0.210	47.4	0.5	3.7	0.2
Stem of Jerusalem art. .....	0.871	0.129	45.7	0.5	4.5	0.2
Manure (mean,) .....	0.204	0.796	38.8	0.4	0.2	0.3

#### Mutual Improvement—Clubs.

What, we would ask, is there to forbid farmers' societies, or conversaciones? or, if such words would be considered too much in the fashionable or boarding school style for the farmer, let the word "club" be substituted, and then we shall have farmers' clubs,—meetings we think both desirable and practicable. Intercourse with each other is what the cultivators of the soil need, to enlarge their views, diffuse information, promote inquiry, and create a feeling of unity of interest and concert of action, so necessary in all communities. It is the contact of mind with mind that brightens the faculties, and elicits light, as the collision of the flint and steel produces the spark and the flame. Horticultural meetings of any kind have a tendency to these good effects; institutes, societies, clubs, all co-operate to the same end, and with different degrees of effectiveness, contribute to the same result.

In England, where the science of agriculture, and the means of improving it, are as well understood, to say the least, as in any part of the world, clubs, or neighborhood meetings of farmers, for the discussion of agricultural topics, have been found among the most effectual aids the cause of the farmer could receive. That such would be the case in this country, we see little room to doubt; in fact the influence of our country and town societies, furnishes the most conclusive evidence on this point. It may indeed be said that the greater diffusion of agricultural periodicals in this country, renders such meetings less necessary than in the old country, where such papers or books are rare. This may in part be true, but could not these two means of improvement be brought to act together, and thus exert an influence more favorable and more powerful, than both acting singly and detached from each other.

The difficulty in originating and sustaining such clubs, has been found to arise from the want of continued in-

terest in the discussions, and the paucity of topics introduced. To do away these objections, we propose the following method. Let the members of these neighborhood clubs, provide themselves with a number of the best agricultural publications of the country, each one, if he chooses, making his own selection; let these publications be a common stock for the benefit of the members; let meetings be held once a month, at which these publications shall be returned, exchanges made, the various matters found in them, discussed, and the practical experience of the members for or against the several opinions advanced, be made known. We can hardly imagine that in such case the meetings would be uninteresting or un-instructive. At the close of the year, the numbers of each volume could be collected and bound, and ere long an agricultural library for the use of the club would be established, of the most valuable kind. Few individuals are found who are able to procure all the journals of this class they would like to read, nor can any one journal embody all the valuable papers and facts that are furnished for the information of the public. In this way an individual can command the reading, and avail himself of the information given in, the best farming periodicals of this country or the world, without any extra trouble or expense.

Should any neighborhood of cultivators be disposed to adopt our suggestion, we may be permitted to recommend, after our own Cultivator, The New England Farmer, The Farmer's Monthly Visitor, The Maine Farmer, The Farmer's Cabinet, The Franklin Farmer, The Yankee Farmer, American Farmer, and particularly Rufin's Farmer's Register, one of the best publications in this or any other country. Of European works, the London Farmer's Magazine is the best.

#### Gov. Hill's Agricultural Address.

The October number of the Farmer's Monthly Visitor contains an address delivered at Keene, N. H., September, 1839, by the editor of that paper, the Hon. Isaac Hill. The address is a sound and able production; characterized by the strong and clear common sense views, and straight forward practical manner of the author,—qualities most important in the man who wishes to impress valuable truths upon plain, hard laboring, but close reasoning men; such as constitute the great mass of our agricultural population.

We would willingly lay a large part of the address before our readers, but our limited space forbids, and we shall give a few disconnected paragraphs, cordially recommending the careful perusal of the whole to such as are fortunate enough to possess it. In speaking of the great advantages of New England, in point of morals, education, means of wealth, and general excellence of habits in her population, Gov. Hill remarks that "Man's Necessity is his greatest temporal blessing."

Strange as this assertion may seem to the man who obtains his bread by the sweat of his brow, by labor either physical or mental, there can be no proposition more strictly true. That New England owes her exemption at this time from the curse of slavery that once like a dark cloud overshadowed her hills and plains, to the stern necessity imposed upon her sons, by her soil and her climate, that each one should exert himself for his own subsistence, is not made more clear by Gov. Hill, than the position that to the same necessity she owes her healthy state of intellectual feeling, and high tone of moral cultivation. Look at the world, and see where intellectual effort and moral light the most abound; where man approaches the nearest to his destiny, a state little lower than that of angels; or where he is sunk in apathy and idleness, and in physical or mental energy rises but a shade above the brute. Men rise the highest in the scale of being when necessity induces activity of both mind and body; when the physical part is employed in carrying out the ideas and conceptions that spring from the active energies of the instructed mind. The great truth is, there is never any advance made in civilization, knowledge, and their attendant blessings, till want is realized. The voluptuous, imbecile inhabitant of the Southern Pacific isles, whose wants are spontaneously supplied by nature, whose bread is produced on the trees that overhang his hut, whose clothing is limited to the merest fragment, whose cloudless sky precludes all care for shelter, except perhaps from an occasional shower,—have been found the most difficult of all people to rouse from their listlessness to the hope of a brighter destiny; and why? Because it was impossible to convince them they had any wants. Widely different has it been with the New Englander; from the landing on the Rock at Plymouth, necessity has forbid any pause to exertion, and the beneficial results are such as cannot be mistaken.

In illustrating the position that "The practice of farmers in New England [and, we may add, elsewhere] is to go over too much ground; he relates the following:

"A rich man of the society of Friends, who owns estates in the vicinity of Wilmington, in the state of Delaware, leased a single acre of good land to a poor man in his neighborhood, with the condition of furnishing him with a horse and cart twice a week to go to market. The product of the acre was to be divided equally; and the owner's annual share, on an average of five years, was \$174.20, making the income of the acre \$248.40 a year. The owner and tenant did well for five years on the single acre; but the latter thought he had not business enough, and asked for another acre, on the condition of adding the use and services of a man, a horse and a plough occasionally. To the owner, and to the tenant of course, the whole proceeds were less from the two acres, for a second term, than they had been from the one acre for the first term."

The benefits of agricultural associations are enforced by Gov. Hill in the strongest terms, and the example adduced as illustration could not have been more fortunately selected. We have passed over those hills and valleys, and know that the Berkshire Agricultural Society has added thousands, if not millions, to the wealth of that county.

"Associations, even where only 'two or three are gathered together,' is more potent than individual effort alone: the experience of several collected, is better than the experience of one. Where much time is not consumed—where too much expense is not incurred—where the shadow is not grasped for the substance—where a passion for extended improvements does not outstrip and leave common sense behind—we may expect to derive much benefit from agricultural societies. \* \* \* \* \* Berkshire, in Massachusetts, was the first to institute, and has been the longest to persevere in her agricultural society. Her mountain region can find at this time no superior in the United States, in fertility and production. Magnificent cattle range in her pastures; ten thousand fleeces are taken from her mountains; the fattings of the flocks are hers. The crops of wheat and corn groan as the burden of her hills and valleys."

Gov. Hill has seen fit to put his hearers on their guard against some of the humbugs or speculations of the day, particularly those belonging to agriculture; and the introduction of such plants as he conceives unsuited to the climate or soil of New Hampshire. Of this class he considers the Multicaulus, the Chinese corn, and the sugar beet, when grown for sugar. The success of the milk manufacture he is inclined to think is doubtful; the Chinese corn an imposition, and the sugar maple more certain than the beet. In the middle states the case may be different, and both silk and sugar succeed.

The address speaks highly of the Black Sea wheat, of the Brown corn, and of the Rohan potato. Of the wheat it is said, in comparison with the Tea and the Siberian wheats, that "it requires not so long a season to grow and ripen—it better stands the blight, which is the great danger of all wheat sown so late in the year as to avoid the grain worm and weevil—and it produces, in the absence both of the blight and the worm, quite as large a crop as any other kind of spring wheat." Of this wheat, Mr. Critchett, of Epsom, N. H., raised 42 bushels of clear grain this year, from four pecks of sowing.

The Brown corn has received its name from a gentleman who first cultivated it on an island in the Winnepesaukee Lake, and who last year raised of this corn one hundred and seven bushels to the acre. Gov. Hill procured some of it, for planting, last spring, and speaks of it in the highest terms,—it having fully ripened by the first of September, or as early as any corn known, and yielding nearly double to the Canadian, which approaches the nearest to it in early maturity. The address says with justness,

"The Brown corn carried south, will be quite as sure of an ample space of time to grow in a short season, as perhaps any other. We had better pay a four fold price for seed corn raised and brought to us from one hundred miles north, than to have the gift of the same kind of corn, brought to us from a climate which, either by elevation or by distance on the map, measures the climate of two degrees south."

Gov. Hill's experience with the Rohan potato, seems to justify the favor with which it has generally been received, and adds new proof of the inherent natural vigor of the plant. He was, in addition to a quantity from other quarters which he planted last spring, favored with one, direct from the garden of Prince Rohan, in France. "It was shrivelled, and looked as if it might have passed perils by sea as well as perils by land; but every sprout of the eighteen cuttings into which it was divided, has sprung up and has become a fruitful vine." The roots have not been gathered, but the promise was fine, and he had the satisfaction of finding, that in appearance, those from the growth of this country, and the ones from the last import, were similar in every respect.

Of the cultivated roots, the address gives the preference to the ruta бага. In speaking of a common objection to the turnep, Gov. Hill remarks:

"It is a mistake to suppose that the ruta бага spoils either the meat or the milk of the animal fed upon it. This mistake originated in the fact, familiar to many practical farmers, that the turning of fat cattle and cows into fresh feed where turneps, cabbages, and onions have been raised and cleared out, leaving tops and leaves, will make them liable, when slaughtered or milked, to leave the meat or the milk tainted with the flavor of the articles upon which they have fed. Milch cows, fed once a day on ruta бага, will communicate no taste to the milk; and if there be any doubt about fat cattle, the leaving off the ruta бага one week, and substituting corn, or other food, will leave their meat in as good flavor and quality as if they had been fed exclusively on corn."

We have had considerable experience, both in raising and feeding the ruta бага, and consider it of the greatest value. From the use of the bulb itself, we have rarely found any inconvenience, arising either to meat or milk; but the tops give to milk and butter a most disagreeable flavor, and should never be fed to milch cows, or animals that are to be slaughtered. Care in this respect might do away some prejudice against the turnep, and would doubtless prevent the spoiling of sundry lots of butter annually.

Those parts of the address devoted to the importance of freeing soils from weeds and keeping farms clean—illustrating and enforcing the use and value of salt for animals—the necessity of freeing soils from surplus water by draining—and the loss which the farmer, more than most other men, sustains from neglecting the roads, are well conceived and forcibly expressed. If agricultural societies produced no other good effect, than the calling

farmers together annually to listen to such addresses as this of Gov. Hull, or many others we might mention, and have the objects they should keep in view, and the duties they should perform, as luminously spread out before them, the labor and expense of sustaining them would be remunerated a thousand fold.

#### Wood Painting.

The advantages of covering wood buildings with paint are so obvious, that explanation or enforcement must be alike unnecessary; the only thing requisite would seem to be the ascertaining of the best method of performing the work. We paint our buildings in the first place for ornament, and in the second place to give their materials greater durability. The first is depending in a great measure on the coloring materials employed, and the taste shown in their adaptation; the last on the quality of the articles used, and the skill with which the work is done.

The closing of the pores of the wood, or saturating the surface of the wood so as to exclude atmospheric action, is the great point to be gained, and for this we must mainly rely on the oil, the coloring matter only serving to form a coating to the wood, or protecting the surface, so long as it is combined with oil. It is a common complaint, that paint on buildings is not as durable now as it was formerly, and numerous buildings to be every where seen almost denuded of paint, that have stood but a few years, would seem to give some grounds for such an impression. If such is the case, the fault must be in the material, the preparation, or the putting on. There is unquestionably a great adulteration, both of oil and white lead, practiced in many cases, but it cannot be so general as to justify the inferiority of modern painting. That it is not put on with as much care and skill, will hardly be admitted; the only inference, then, would seem to be, that the fault is in the preparation, and such we believe to be the case.

If we can ascertain what is necessary to have painting durable, and determine the manner in which it is usually performed, we may perhaps arrive at the source of the evil, and so be able to point out a remedy. The first object to be attained, is the saturation of the entire surface with oil, and this should be applied as long as it will be readily absorbed. Utility should be attended to before ornament, and the coloring is comparatively of second rate interest. If oil without any paint was applied once or twice, experience shows the wood will be much better protected, and perhaps in the end would be found the cheapest method; but the first cost would be considerably enhanced from the additional number of coats that would be required. Modern painters of buildings seem to direct much of their attention to the rapidity of execution, and this has been found incompatible with the proper filling the wood with oil, without extra ingredients or preparation. Oil, in sufficient quantity to close the pores of the wood, applied with no preparation except the ground lead, would not dry so quickly as is desirable, where haste alone is consulted, or appearance, without regard to permanence, considered in the work.

The preparing of drying oils, or the ingredients that, mixed with oils, will cause them to dry or harden almost at once, has become a regular branch of trade, and mixtures of spirits of turpentine, litharge, &c. &c., are found for sale at the shops, and used extensively by painters. The consequence of this practice we believe to be, that the oil or paint so prepared, dries with such rapidity when applied to the wood, that little or none is absorbed, the pores are only closed by the paint, and as this has little firmness, owing to the decomposition of the oil by the ingredients added, or the small quantity of the oil combined, it soon gives way before atmospheric action, and the wood is at once left unpainted and unprotected.

To be convinced that turpentine must be injurious to the durability of paint, we have only to remember the effect that turpentine produces on oil spots on clothing, floors, &c. The housewife is well aware of the effects in such cases, and the painter should know that the operation of the turpentine used by him, is precisely similar in proportion to the quantity used, and that where mixed with oil, a decomposition of the latter is accomplished by it. Every one is aware of the fact, that in painting pine boards, if what is called a fat knot occurs, (or one in which turpentine abounds,) it is almost impossible to cover it with paint, and the reason is obvious; the turpentine decomposes the oil with which the paint is mixed, and the latter, left free, is at once rubbed off, since the principle of adhesion is destroyed. In painting a pine floor, a few years since, in which such knots occurred, we found it impossible to make the paint adhere, until by repeated applications of oil, and the consequent decomposition of the turpentine in its combination with the oil applied, the surface was so far freed as to permit adhesion. In modern painted buildings, we frequently find that as soon as the superficial gloss wears off, the paint seems in the state of dry powder, easily rubbing off on every object it touches, or washing off in every rain. Here the cause of the defect is evident. So much turpentine, or other drying matter was added, that the oil was decomposed instead of being absorbed, and the oil, which is the only principle of durable adhesion in paint, being absent, as a natural result, the paint soon crumbled to powder. Such paint, too, while it lasts, affords but little protection to wood. Owing to the absence of oil, it soon becomes permeable to moisture, the pores of the wood, being unclosed, retain it, the apology for paint retards its evaporation, and experiments and experience would seem to show, that wood thus nominally

protected, decays faster than it would if left to the usual action of the elements, in its natural state.

All the preparation that oil needs, to make good paint, (and in this we are confident every painter who understands his business will agree with us,) is a thorough boiling to free it from its impurities, and render it perfectly clear and limpid. The desire of dispatch has led to additions to the oil, which indeed ensure that object, but are destructive of durability, and certainly add little or nothing to the finishing or the ornamental part. We strenuously advise farmers to paint their buildings, yard fences, &c., as it contributes to give a look of neatness and thrift to the farm, that nothing else will do, and besides, if well performed, it increases their value and durability, in a much greater degree than the expense. But they should remember that in painting, every thing is depending on having the work well done, the articles good, and the operations skillfully performed. Great haste in painting is inadmissible; oil must be applied to the wood, and time allowed for absorption. Some painters talk of laying on two coats of paint in a day; they may do it, but we are confident they will not for him who looks more at durability than dispatch, and has more regard to permanence than to the saving of a few shillings in expense, or a few hours in time.

#### Hatching Chickens.

A contrivance, to which a long Greek name has been given, has been put in operation in London, one of the uses of which, and the most prominent one, is the hatching of chickens. The heat is supplied by water, which gives a more uniform temperature than can be derived from any other agent, and though not quite equal to the chicken ovens of Cairo, the machine, while it occupies little space, does a respectable business, turning out about a hundred chickens daily when in operation. Hens sometimes addle their eggs in hatching them, the machine never. If the egg is good, the chicken is sure to appear at the proper time, and is as vigorous and active as if under the care of its proper parent. It feeds without difficulty, though it experiences no inconvenience from going without food for 12 or 20 hours after leaving the shell. Darkness is found most proper in the process of incubation; and the remarkable fact has been disclosed, that the chick, at the moment of leaving the shell, is heavier than the whole egg was in the first place. The older chickens brood the younger ones, and the pleasure from this operation appears mutual. It is to be presumed that the Eccleobian will become a part of every poultry establishment; and that hens, saved the drudgery of hatching and providing for their young, will be confined to their legitimate business of providing fresh eggs for the table, or such as are required for hatching in the machine.

#### Items from our Note-Book, No. 1.

##### Hedges and Fences.

The following remarks, copied from a letter of Colonel Springer of Stanton, Delaware, published in the Western (Ohio) Register, agree in the main with the observations we have been able to make of the success, or probable result, of the efforts at hedging in this country. The best specimens we have noticed, exhibiting a closeness and freshness of verdure that indicated health and permanence, were between Geneva and Canandaigua, near the former, and in the town of Sodus, near Lake Ontario. Unless we are misinformed, these hedges in both places were planted by the same individual, an Englishman, and are of the thorn so much used in that country. Our hot and dry summers are unfavorable to hedges, or at least to the plants commonly used for that purpose, when treated in the ordinary manner. No where in the United States have more persevering attempts been made to cultivate hedges than in the district of Delaware alluded to by Col. Springer.

"I will merely tell you, for your information, that all the kinds of thorn used here for fences, are fast going to decay. I have seen no young hedges planted for the last three or four years, but numbers have been cut down, and numbers more will soon have to be done so. I think you would probably render yourself and the public great service, if you would carry out your project of planting a forest of chestnut into successful operation. It is decidedly the most valuable timber for fencing with which I am acquainted. It is very durable and of rapid growth. I think that ten acres, once well set, would keep your whole farm well fenced. Black locust would also be very valuable as a timber for posts. Chestnut grows here on almost every kind of soil."

##### Baulkey Horses.

There are multitudes of these most uncomfortable and vexatious animals in the country, many more than there would be, if common prudence and care in breaking into the harness were used; and if the following mode of treating them, which we copy from a Boeton newspaper, should perform what it promises, it would prevent much hard swearing, and save many a poor beast a cruel and useless beating.

"A truckman in Boston, that had a refractory horse that would not draw or move forward, beat him most unmercifully. A gentleman came along, who told him he must not beat him any more. 'What shall I do?' said the man, 'my horse has stood here these two hours. Shall I stand here all the day?' 'Oh no, the horse must go, but you must not beat him any more. Get me a rope twice as long as the horse.' The rope was got, secured to his tail, and then passed between his legs forward, then a smart pull on the rope was given. The horse was frightened and showed symptoms of kicking, but the pulling was continued. Suddenly he started

forward, and went off without any more beating. The gentleman had seen that method tried on that most refractory of animals, the Jackass of South America. If you question this, you that have obstinate horses, try it for yourselves."

#### Seton or Rowel.

There are numerous cases in which the use of the seton in the treatment of horses is most beneficial. The following, in substance, from the Franklin Farmer, is one of the simplest methods of performing the operation, and at the same time will be found effectual.

As to the seton, it is thus prepared: Cut as many small thongs of leather as may be needed, about eight inches long, and rather less than an inch wide, one end to be cut rather pointed, the other must have a slit nearly one inch from the extremity of the broad part, and one inch in length. Then draw the skin of the animal with the forefinger and thumb, the skin being thus drawn clear of the flesh, thrust a sharp and narrow pointed knife through the skin between the fingers and the flesh, and introduce the leather immediately. Pull it through to about half its length, then let go the skin and rub the leather with besillean ointment mixed with Spanish flies; turn the strap so that the mixture will be well introduced, and secure the seton by drawing the pointed part through the slit of the other end. Leave it for twenty-four hours, then rub the string again with ointment, and move it as before. The discharge will soon commence, which is the object sought from the introduction.

#### Galls from the Harness or Saddle.

Major Long, in his well written and valuable account of his expedition to the Rocky Mountains, says that his party found white lead moistened with milk, to succeed better than any thing else in preventing the bad effects of galls on their horses' backs, in their fatiguing march over the plains that border the mountains. Its effect in soothing and soothing the irritated and inflamed surface, was admirable.

#### Bee Moth.

Mr. James Thatcher, author of the "American Orchardist," &c. &c. in a communication to the New-England Farmer, says: "I will embrace this opportunity to communicate, for the benefit of the cultivator, what I believe to be an infallible remedy against the bee moth, which has proved so destructive to bees throughout our country of late years. The remedy is simple and easily applied. It consists merely in covering the floor board on which the hive stands, with common earth about an inch thick. A hive set on earth will never be infested with worms, for the bee moth will not deposit her eggs where the earth will come in contact. She naturally resorts to a dry board as her element. The remedy has been employed by a number of persons in this vicinity for several years, with the most complete success."

#### Mites in Cheese.

We copy the following from the Zanesville Gazette, and shall publish it for the special benefit of cheesemakers and cheesemongers, not doubting that it will materially increase the consumption of the article. Were it as fashionable to drink spirits of turpentine as spirits of wine or brandy, the first might be substituted for the last in its application to cheese, and quite as effectually. As it is, we go for the brandy decidedly, and recommend its use to the possessors of all colonized cheeses.

All who deal in cheese, whether housekeepers or merchants, know their liability to be attacked by skippers, and the better the cheese the more liable they are to such attacks. To drive them out, the following mode will be found effectual, while the flavor of the cheese will be greatly improved. Cut out a large plug in the upper side of the cheese, and fill up the cavity with the best French brandy, and repeating the operation two or three times, when the plug may be restored, and pasted over, for the skippers will be found to have left the cheese, making their way outside. A lover of  
"GOOD CHEESE."

#### Value of Sweet Apples.

A recent writer, who thinks apples, especially sweet ones, decidedly superior to many root crops for feeding farm stock, says:

"Their greater cheapness is also becoming established. It has been already shown that they may be afforded, at a reasonable compensation of the expense of planting the orchard and the price of the land, at the rate of half a cent a bushel. This, of course, is only to be expected from good culture and the selection of proper varieties. The expense of root crops, when cultivated in the cheapest manner, may be considered on an average as ten times that amount, or five cents a bushel. Apples are especially valuable, as, in addition to feeding other animals, they are so admirably adapted to the fattening of hogs. For the preceding reasons alone, it may be safe to predict, that in a few years the crop of apples will be considered as only second to the wheat crop."

#### Saltetre for Gargets.

"B. W. F." in the Maine Farmer, gives an account of the use of saltetre for this troublesome disease in milch cows. We have generally found the garget or scoke root, a sufficient remedy, but as it appears to have sometimes failed, the use of saltetre may be the means of saving many a valuable cow. In the use of the garget root our method has been to cut it up fine and feed it to the animal in a mash of grain. The saltetre is dissolved and given in the same way. Mr. B. W. F. says:

"Taking sometime since a hint in the Farmer, I have tried saltetre as a remedy for the garget in cows, and am able to



state with confidence that it is decidedly the best remedy I have ever known used for that troublesome disorder to the dairy. The cow I gave it to was so badly diseased, or rather so subject to the disease, as to be nearly useless a great part of the summer. I gave what I supposed a pretty strong dose—something like two ounces—and in less than twelve hours her milk was as good as ever, and she has not been troubled since."

Mr. F. has also adopted the plan of giving saltpetre to his cows, at the rate of two pounds, made fine and mixed with a bushel of salt; and thinks, given in this way, it will prevent the appearance of the disease. This is probable; but as this substance in any considerable quantity must be injurious, we should advise caution in constantly feeding it to animals not diseased.

#### Scab in Sheep.

The following remarks are from the pen of one of the most experienced and competent woolgrowers in this country. We have had some acquaintance with the remedies proposed by Mr. Grove, and can add our testimony to their value.

"The scab is very contagious, but when observed at an early period, it may easily be cured, or at least prevented from spreading. One of the best remedies is a strong decoction of tobacco, to be applied to the diseased parts, after scratching off the scabs with a comb or other instrument.—The decoction of tobacco mixed with lime water and oil of vitriol, and used constantly when necessary, for some time, will generally effect a radical cure. Another excellent remedy is a decoction of hellebore, mixed with vinegar, sulphur, and spirits of turpentine. Internal remedies are of no use, except when the disorder has induced other complaints by weakening the general health."

### DICTIONARY OF TERMS

USED IN

#### Agriculture and its Kindred Sciences.

[We commenced in the *Genesee Farmer* of last year, the publication of a Glossary of Agricultural and Scientific Terms connected with the cultivation of the soil, which was received with so much approbation, that we have thought best to republish the few numbers which appeared in the *Farmer*, in order to furnish it complete to the readers of the *Cultivator*. To what extent the Glossary will extend, cannot at present be accurately determined. The explanations will be as much condensed as will be consistent with utility, and the nature of the subject. Where a thing, or a process, has a number of names, the one most generally in use will be selected; and where the information sought is not found under one of the terms in use, it will probably be under another of the synonyms.]

**ABRADING.** This is a term applied by some agricultural writers to the crumbling down of earth from the effects of frost. This process is seen most on fall plowed lands, and is an efficient agent in ameliorating and rendering fit for cultivation heavy or clay soils.

**ABRASION.** The wearing away, by running water, of earths, rocks, &c., the banks, or the bottom of streams, and the result of which is the deposit of alluvium.

**ABSORPTION.** The process by which plants and animals are nourished is called absorption. In most plants this office is performed by the roots, and it is through the vessel called spongioles, with which the roots are terminated, that absorption takes place. In aquatic plants, the water which affords the nourishment is absorbed with facility from every part of their surface. By causing the roots to imbibe colored liquid, the general course of the sap may be traced with considerable accuracy.

**ACIDS.** Bodies that have usually a sour taste, and corrosive qualities. Some acids appear only in a fluid state, gaseous as carbonic acid, or liquid as sulphuric acid; others are crystallized, as the boracic, benzoic, &c. Of the acids, the only one that has much influence on vegetation is the carbonic.

**ACCLIMATING.** Plants are endowed with a power of gradually accommodating themselves to the temperature or climate in which they are placed, unless the change is at once so great as to suspend their vital functions altogether. This process is called acclimating. Plants will bear removal better from a warm climate to one of lower temperature, than from a cold to a warm one. As instances in plants, we may mention the potatoe, the bean, the melon, and among fruits, the peach and apricot. The cucumber affords an instance of the effect of acclimation. It is grown in the open air at Cairo and at Petersburg; at Carracas and at Quebec.

**AERATION.** An important change effected on the sap of plants, by the action of light. It consists in the decomposition of carbonic acid gas, which is either brought to the leaves of plants by the sap, or absorbed directly from the atmosphere. The substance of all plants is mostly carbon, and as carbon in its common state, however minutely divided, is never taken up by the sap of plants, this most essential ingredient is obtained in the form of the carbonic gas, from which the oxygen is separated by the leaves under the action of light, leaving the carbon ready for assimilation, or conversion into vegetable fibre. That this process is performed by the green substance of the leaves or stem, is evident from the fact that if a leaf is bruised or its vitality destroyed, its substance is no longer capable of decomposing carbonic gas in the light, or absorbing oxygen in the dark. The necessity of this aeration of sap for the purpose of ripening fruit, or

maturing vegetation, may be seen in some fruit trees, the plum for instance, in which an excessive quantity of fruit causes a premature fall of the leaves, after which, owing to this loss of the organs of aeration, the fruit never ripens, but remains immature and worthless. The necessity of the leaves for aeration, or perfecting the juices of plants, shows the absurdity of plucking or injuring the leaves of any plant before it is ripe; topping corn, &c., under the idea of hastening maturity, or increasing the product. Attempts to improve on nature must be failures.

**AFTER-GRASS.** The grass grown on meadows after they are mown. The usual practice among farmers is to feed this off by cattle or sheep, and in some cases so closely as to nearly destroy the roots of the grass. Unless the turf is close, and the meadow rich, it is better to not feed at all, or very lightly. For cropping after-grass, sheep are better than cattle, since, though their bite may be closer, they do not injure the roots with their feet, like the former. If mown a second time for rowen, it is called—

**AFTER-MATH.** On rich meadows, or where manure can be had in abundance, for top dressing, a second mowing may be justifiable, and the grass so cut, if well cured, is much relished, and eaten with avidity by ewes, calves, and other animals that are apt to become poor under ordinary management. The practice of the second mowing, however, like after feeding, is not to be recommended on the whole; experience proving that the injury grass roots always receive from mowing, is increased by the second cutting. Necessity alone can render after feeding or mowing justifiable or proper.

**AGRICULTURE.** In the most extended use of this term, it is made to embrace all the operations made use of to obtain food for man, whether from the field, the orchard, or the garden. In its proper and limited sense, it means the cultivation of the soil, which is the great source of wealth. The first want of man was food; the place to obtain it was the earth; hence the origin of agriculture; and in proportion to his wants, and the ease or the difficulty with which they can be supplied, is his progress in agriculture. Where the wants of man are supplied by the spontaneous productions of the earth, as in parts of Africa, or in the South Sea Islands; or where the inhabitants expect no food from the earth, as among the Esquimaux, or Someoies, there agriculture is unknown. It is only where exertion is necessary to procure food from the earth, that wants abound; that wealth is increased; and that agriculture becomes a science, and assumes its proper place as the basis and precursor of civilization, society and order. All history proves that such is the fact. The creation of wealth belongs to agriculture. Food must be had, and the value of every other article depends directly or remotely on the amount of food it will procure. The skill of the mechanic may improve; the enterprise of the merchant may exchange; but the origin belongs to the earth, and the cost and the profit is alike determined by the result of agriculture.

Science has within a few years done much in aid of agriculture; not that many positive discoveries have in the first place been made by the sciences, of which the agriculturist has availed himself; but the cause of certain results before known to the farmer, have been revealed by chemical or other researches, and thus the means of more certainty and in many more cases of producing the same results has been obtained. On this is based the improved system of agriculture. Where the earths are not in due proportion, it is impossible to make or keep the soil in a productive state. The nature of the earths is now inquired into, and their balance maintained by a rotation of crops, or the application of such matters as shall prevent exhaustion, or restore fertility to such as have been improperly treated. The capabilities of the earth in affording food, when properly tilled, are but imperfectly understood. Now and then instances occur in which either by skill or accident these powers are developed to the surprise of all; but what is done in one case may be done in others; and when agriculture is what it should be, when the tillage of the soil, and the application of proper manures shall be better understood, the results that now astonish will become common, and while the labor shall be diminished, the product will be vastly increased.

**AIR.** In a state of purity, air consists of nitrogen and oxygen, in the proportion of 76 of the former and 23 of the latter; but as it exists in the atmosphere, it contains about one part in 500 of carbonic gas, and also aqueous vapor in the form of an elastic fluid, the proportion varying from the merest trifle, to 11 grains in a cubic foot. Air acts a most important part in the processes of germination, and subsequent vegetation, not only furnishing the oxygen required to decompose the carbonic gas consumed by the plants, but the most of the gas itself. The water held in the air is also easily parted with, and hence the great advantage of aration or frequently stirring the earth, to bring its particles in contact with the atmosphere. A square foot of earth in a solid form exposes but a small surface to the action of the air, and hence absorbs from the atmosphere but little; pulverize this mass, and the surface exposed to the action of the air is increased a million fold, and its powers of absorption from the atmosphere in the same proportion. This shows the absurdity of those who refuse in hot or dry weather to stir the earth around plants under the apprehension that it will render them more dry. Multiplying the absorbing surface by stirring the earth is the only way of obtaining the moisture which in greater or less quantities always exists in the atmosphere.

**ALBUMEN.** A colorless insipid fluid, coagulating at

a heat of 120°, existing in the leaves, juices, and fruits of most plants, but most abundant in animal products. The white of eggs is nothing but pure albumen, and the blood contains large quantities of the substance. Its principal use in domestic economy, is in clarifying or cleansing fluids; such as sugars, &c., for which purpose it is unrivaled. Milk contains albumen, and hence is sometimes used for cleansing syrup, but it is inferior to the whites of eggs. These, carefully incorporated with a fluid when cold, and then submitted to a coagulating heat, will lift all impurities to the surface, where they can be easily taken off by skimming. Albumen is more abundant in the bark of the red or slippery elm, than in any other vegetable product, hence its value for medicinal purposes. Albumen is composed of carbon 52, oxygen 23, hydrogen 7, and nitrogen 15.

**ALBURNUM.** Wood of trees is usually composed of three distinct parts; the pith or central part, having a loose spongy texture; the heart-wood, the most durable and valuable part of the tree; and the sap wood or alburnum. This last is usually whiter than the heart-wood, is more porous, and through it the circulation of the sap is principally performed. It is the soonest attacked by the borer or powder post, and in exposed situations is always first to decay.

**ALCOHOL.** The purely spiritous part of all liquors. It is the product of vinous fermentation, and can be derived from all substances capable of such fermentation. It is the intoxicating principle of liquors, and few nations have been found so rude as not to have found some means of producing it. Alcohol is produced principally by the distillation of wine, molasses and grain. The product of the first is brandy, the second rum, and the third whiskey or gin. Alcohol is of much use in the arts, but it has, by its general use, produced a most unhappy effect on the happiness and morals of multitudes. Perhaps greater quantities of distilled spirits are used by the nations that border on the Baltic than in any other part of the world, and here they are principally produced from the distillation of potatoes. Pure alcohol consists of hydrogen 13.70; carbon 51.98; and oxygen 34.32.

**ALGAE.** One of the families of plants into which Linnaeus divided the vegetable kingdom. They are defined to be plants of which the roots, leaves and stem, are all one. The remains of algae are abundant in a fossil state in the shale of many parts of New-York, and their decomposition may have contributed to the fertility of the strata in which they exist.

**ALKALI.** A substance usually extracted from plants; and distinguished by the following properties: It has an acrid and corrosive taste and power; it changes vegetable blue to a green, red to a purple, yellow to a red brown, and purple reduced by an acid to its original color. It is most used in the arts for neutralizing acids. It is best known in the shape of potash and soda. These unite with oils and animal fat, and form soap. Lime is possessed of alkaline properties, which gives it its principal value in many cases. Alkaline substances have been divided into volatile and fixed: the volatile being known as ammonia, the fixed as potash or soda. Modern chemists have divided them into 3 classes: 1, those with a metallic base combined with oxygen, potash, soda and lithia; 2, that which contains no oxygen, as ammonia; and 3, those containing oxygen, hydrogen and carbon, as aconita, cir-cuta, morphia, &c.

**ALLUVION.** Land deposited by the action of rivers; either at the mouths in lakes or the sea, or on the banks in their passages to these receptacles. Constituted as it usually must be of the richer and lighter parts of the regions drained by the river that deposits it, it is the most fertile of soils, and the most valuable, when it can be drained, or rendered secure from floods. Nearly the whole of Holland is alluvial. In this country the vast tract on both sides of the Mississippi, for a great distance from its mouth, is of this character; but owing to its annual submersion is of comparatively little value. Perhaps there is no river in the United States in proportion to its length and volume, that has so much valuable alluvion on its borders as the Genesee.

**ALUMINE.** One of the earths most important to the agriculturist, and entering largely into the composition of all rocks, clays and loams. It was formerly termed argil, or argillaceous earth, but Sir H. Davy's discoveries led to the belief that it was a metallic base combined with oxygen. It is found nearly pure in the Corundum; porcelain clays and kaolin contain about one-half of this earth, and it may be obtained pure from the alum of commerce, by chemical processes. Alumine is the principle that gives the peculiar tenacity and plastic nature to clays; rendering them heavy and impervious to water, in proportion to the quantity contained in them. Alumine has a great affinity for water, hence clay lands are usually more cold and wet, and more difficult to cultivate than those into which it enters in less proportions. Its presence in soils is, however, absolutely necessary to prevent porosity; and when combined in due proportion with the other principal earths, it constitutes one of the surest ingredients of a fertile soil. Much attention has of late been paid to the amelioration of clay soils, and of all the methods tried, thorough draining has proved the easiest and most effective. When clay land is drained, its texture is changed; and the plants it naturally produces, as well as those it is made capable of producing, are of a higher and more valuable kind. Alumine is of much use in the arts; it is extensively employed as a cleaning powder; as a mordant in dyeing; and is the basis of bricks, crucibles and porcelain.

**AMMONIA.** Volatile alkali. It is a transparent colorless gas, of about half the weight of common water,

with an exceedingly pungent smell, extinguishes flame, and is fatal to life. Its old name was "spirits of hartshorn." To the agriculturist, ammonia is particularly interesting from the fact that those substances that contain the most of it, are the most efficient manures, and act with the most certainty and promptness. Ammonia is produced from soft or fluid animal substances while in the process of decomposition, and this change is rapid in proportion to the quantity of earthy salts they contain. It is particularly to the developments of ammoniacal gas," says Chaptal, "which, combined with gelatine, passes into plants, that we can attribute the wonderful effect produced upon vegetation by certain animal substances." These substances are the animal manures, the urine, *poudrette*, the bones, horns, hair, &c. The urine of the animal contains in muriates and carbonate of ammonia about 20 per cent, besides 11 per cent of phosphate of lime and sulphate of potash, or 30 per cent of the most active manure yet discovered; and the saving and proper distribution of it forms an important item in Flemish husbandry. The larvae left after the cocoons are reeled in the extensive silk manufactories of France and Italy are considered invaluable as a manure. Their excellence is owing to the ammonia they contain, which in them Chaptal found to exceed in quantity that of any other animal substance.

### Extracts from our Correspondence, ANSWERS TO INQUIRIES, &c.

#### Management of Hogs.

Mr. James T. Warder, of Clark Co., Ohio, who has asked our opinion on the system of feeding hogs proposed by him, is answered, that, setting aside the contingency of a failure of the crops, (beets and potatoes,) on which he principally relies for feeding, he will probably succeed. He will doubtless find, however, that it will be necessary to make the most of his ten acres of roots, and his ten acres of corn, to bring his 200 hogs up to 250 or 300 lbs. Ten acres of clover, of the second year, will give abundant room and pasture for ten swinish "mothers and their progeny," if they are allowed besides "slops, boiled vegetables, bran, and milk from the dairy." Mr. Warder will find it necessary, however, to take effectual measures against the rooting of his swine, as, unless this is done, his fine clover fields would become a waste,—our experience showing that there are few things of which swine are more fond than the roots of clover. The facility with which corn and roots can be grown on the rich prairies of the west, gives the farmers of that part of the United States advantages for the making of pork possessed by no other, and which has thus far proved one of the lucrative branches of productive industry west of the mountains.

#### Night Soil.

Mr. Robinson, of Baldwinsville, inquires "by what process night soil can be converted into an inodorous manure in a short time, so that any cultivator may be able at once to remove a nuisance, and obtain a valuable manure." We are unable to inform Mr. Robinson of the processes adopted where the preparation of *poudrette* is carried on extensively and in the most approved manner; but it is said in the first vol. British Husbandry, that "All unpleasantness of odor may be prevented by the mere use of ashes; and were those thrown upon the night soil, or into privies that have no communication with sewers, the ashes made in every dwelling house would so completely absorb the fluid parts, that a solid heap of manure would be produced, which might afterwards be removed without difficulty or offensiveness." This is the method practiced extensively in some parts of England, and on the continent. Lime is, however, much better than ashes, and this is the disinfecting agent wherever *poudrette* is produced. In Rigby's Agricultural Reports, the following is recommended as the best method of preparing and using night soil:—"Spread it on a spot of clean grass; let it be well harrowed on a clear drying day; then put it under cover, and add a chaldron of lime to four loads of the soil in that state, and it will become dry, and can be reduced to an inodorous powder." All that seems to be required, is to mingle with the drained material something that will dry and render the mass friable and pulverulent. Lime is the most efficient agent for this purpose, and that which is slaked, is stated in Pilkington's Transactions to be preferable, for this purpose, to that which is caustic.

#### Planting Apple, Plum and Peach Seeds.

"Messrs. Editors—Will you please to say what is the best time for sowing apple, plum and peach seeds, for raising stocks to graft upon; and if the spring is the best season, then in what way should the seeds of each be kept over the winter?" K. D., Lancaster Co., Pa.

With the apple it usually makes but little difference whether the seeds are sown in the spring or fall, they being very certain to vegetate, whether placed in the earth in the spring or fall. The manner in which they spring up in apple pomace is proof of this; but if put into the earth in the fall, they sometimes suffer from mice, an evil avoided by spring planting. Nature, however, points out fall planting.

Fall planting is doubtless the best for plum and peach stones, and we have rarely found any difficulty in their vegetating, when planted in light garden or good mould, and slightly covered with such earth through the winter. The following, from a letter of D. Chipman, of Ripton,

Vt., will show the result of an experiment made by him, from which useful hints may be taken. "I took a quantity of peach, cherry and plum stones, with a number of butternuts and walnuts, or in the language of the south and west, hickory nuts and white walnuts, wrapped them in a cloth, that I might more conveniently take them out of the ground in the spring, and buried them in a loose muck, under a fence, where they were covered with a snow drift during the winter. When I took them out in the spring, the sprouts had perforated the cloth in all directions. When I opened the cloth I found the stones, as well as the walnuts and butternuts, all opened, and the young plants disengaged from them, which I placed in the ground, and they all grew." Whether planted in this way, or without a covering, we have experienced no difficulty when the stones of these trees were planted in the earth, and exposed to the softening and preparatory influences of the winter.

#### Improved Berkshire and China Pigs.

Our respected correspondent, to whom we are indebted for the excellent "Chapter on Swine," in this paper, informs us that he will have for sale by the first of May next, a considerable number of pure blooded improved Berkshire and China Pigs, which he believes will be inferior to no other stock in the United States or England. The price per pair, caged and delivered on board steam boat at Buffalo, at eight weeks old, will be for Berkshires \$20; Chinese \$15; Tuscaroras \$15. He also expects to have a few Black Siamese Pigs in September next, which will be sold at \$20 per pair. Address A. B. ALLEN, Esq., Buffalo, Erie Co., N. Y.

#### The Rohan Potatoe.

Of this potatoe there seems to be no difference of opinion. All agree that it is no humbug. Mr. James J. Jackson, of Wellsboro', (Pa.) after expressing in strong terms his condemnation of the Chinese Corn Humbug, says, that from one potatoe weighing 10 oz., with 53 eyes, he raised the last season, 134 lbs. measuring two bushels, being an increase of 214 fold in weight. The potatoe was cut into 53 pieces, and two pieces planted in a hill, in sandy loam, manured in the hill, on the 17th of May; twice plowed and hoed. Mr. J. will see that we have adopted his suggestion in relation to a table of contents.

Mr. Levi Robbins, of Copenhagen, (N. Y.) says—"In the spring of 1838, I planted 6 lbs. 12 oz. of Rohan potatoes; in the spring of 1839 I let two of my neighbors have 6 lbs. 12 oz. each, and several others I let have one potatoe each. The remainder of the product of 6 lbs. 12 oz. I planted; part of them as early as the ground would answer, and the other part about the middle of May; and one moderate sized potatoe on the sixth day of June. Part of the crop was injured by frost in June, and also by the grub worm; but notwithstanding these disadvantages, I had 700 bushels. From one potatoe I had nine bushels and a half. From the potatoe planted on the 6th of June, I had three bushels. In another experiment from half an ounce of seed I had 30 lbs. Sixty of the large sized tubers fill a common sized salt barrel, and sixteen of the very largest will fill a bushel basket. I think they are a rich and valuable potatoe for the table and for feeding."

Mr. George C. Gillett, of Clarkson, (N. Y.) says—"I bought three and a half small Rohan potatoes for two shillings, which together weighed 13 ounces. I planted them in 21 hills, putting two eyes in a hill. The tops grew very large, and were still green when the frost in September killed them. I dug them soon after, and they measured three bushels and a peck; the largest ones weighing two pounds and six ounces."

#### Culture of Carrots.

Mr. Gillett also informs us that on the 10th of June, he sowed about 11 rods of ground to carrots, which was all he had seed to sow. The ground a sandy loam—the year before in potatoes, with manure. The ground was raked over with a garden rake; then marked out in drills 16 inches apart, and the seed planted and covered by hand. Owing to the seed being poor, and the cold weather which followed, nearly a third part of the ground was almost naked. They were hoed twice, and were harvested about the middle of October, and the product was 37 bushels. He thinks that if it had been sowed early and the ground well supplied with plants, it would have produced nearly double the quantity.

#### To make Leather Water-proof.

A correspondent at Northampton, furnishes us with the following recipe, published in the London Mechanics' Magazine, by Col. Macerone, for making a composition, which it is said will render boots and shoes water-proof:—"Melt a pound of tallow with half a pound of rosin. When melted and mixed, warm the boots or shoes, and apply the hot stuff with a painter's brush until the sole and upper leathers will suck in no more. If it be desired that the boots should immediately take a polish, dissolve an ounce of bees wax in an ounce of spirits of turpentine, to which add a tea-spoonful of lamp-black. A day or two after the boots have been treated with the tallow and rosin, rub them over with the wax and turpentine, but not before the fire. Thus the exterior will have a coat of wax alone, and shines like a mirror. Tallow, or any other grease, becomes rancid and rots the stitching as well as the leather, but the rosin gives it an antiseptic quality and preserves the whole."

## Communications.

### A Chapter on Swine.

The writer of the following article, having become a breeder of improved swine to some extent, among other choice stock, has found himself so often called upon for descriptions of them, and rules for their breeding, that, by way of general answer to numerous inquiries, he has embodied below such information as his little experience and limited range of inquiry have enabled him to obtain. Though much has been desultorily written upon this interesting subject, we have still to regret the want of some standard work to refer to, for full and complete information in so important a branch of rural economy. It is to be hoped, however, that the British Society for the Diffusion of Useful Knowledge, will soon add to the valuable Treatises that have recently appeared on horses, cattle and sheep, a similar one on swine, and thus supply this great desideratum. The substance of the rules of breeding, together with some other observations, appeared originally over the writer's signature, in the 2d and 5th numbers of the current volume of that excellent agricultural periodical, the Franklin Farmer, published in Kentucky. Those who then took the trouble of perusing them, he trusts will excuse their re-appearance here, among a numerous and almost entire new class of readers.

Of the hog tribe, (*Sus*) zoologists describe no less than six species, some of which are so entirely distinct in their general habits and appearance as to have prevented their ever breeding, or even associating together. Five of these species, however, can only be regarded as matters of curiosity to us at present; we shall therefore pass them over, and come at once to that known as *Sus scrofa ferus*, the common wild hog of the Eastern Continent, and from which has directly descended the domestic among us, in all its countless varieties. Except with those nations where its flesh was forbidden by their lawgivers, the wild boar has ever been considered a great delicacy, and eagerly sought for, not only to gratify the appetite of the epicure, but as affording a favorite amusement in the chase, that was considered equally noble, dangerous and exciting to those who followed it. Among the earliest feats that Zenophon thinks worthy to record of his favorite hero, Cyrus, is that of hunting and slaying the wild boar with his own hand; and the greatest of modern heroes, Napoleon, thought a chase of the same kind highly indispensable to royal habits, and to assist in qualifying him to assume the imperial purple, with the greater dignity and grace.

The time of the domestication of the hog, like that of most other animals, is lost in remote antiquity, but that it must have been very early, we infer from the fact, that the Greeks and Romans offered it as a grateful sacrifice to Ceres, the goddess of agriculture, in order to propitiate her smiles upon their labors, previously to commencing their harvests. That distinguished philosopher, Aristotle, also gave hints on the raising and breeding of swine, which are worthy of regard at the present day; and Varro and Columella, if we could substitute soft, thin hair, for "thick, strong and erect bristles," have described the main points, of what we may now consider, with all our modern improvements, a very perfect hog.

The reasons that were supposed to influence the forbidding of eating swine's flesh, as well as that of several other creatures, under the Levitical law, are, that the children of Israel, at the time of their exodus out of Egypt, were a very debased and gross people; but few grains and vegetables were then cultivated to vary the food of man, and as they were destined to inhabit, where a generally hot and dry climate prevailed, a great indulgence in these meats would tend to thicken the blood, check perspiration, and consequently, especially engender scrofula, scorbutic and cutaneous diseases. We find among the Egyptians, that some of the same prohibitions of Moses were made sacred by their priests to that singular people, with the intention, undoubtedly, of more certainly preventing their being used as food, and mainly for the reasons spoken of above. Pork, however, as now usually made, and above all eaten in the moderate quantities that it generally is, and accompanied by so great a variety of grain and vegetable food, can no longer be considered objectionable, especially in a cool climate: and as it is one of the most palatable and substantial of meats, the cheapest and easiest reared, the longest and most certain to keep, it has at length become the most necessary item of the stronger food of civilized man, and without doubt the most important of the stock grower's products in the United States.

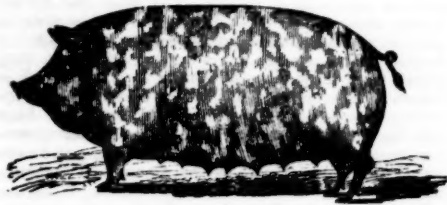
What amount of pork is annually raised and consumed in the republic, it is impossible to accurately say, but something of an approximation may be made towards a calculation of it. The census of the present year, will doubtless give us a population in round numbers of 16,000,000. The army ration to each soldier of the best quality of mess pork per day, is three-fourths of a pound, which would be about equivalent to one pound of the whole hog. It is intended that this ration shall be rather more upon an average, than each soldier can consume; we will therefore put the allowance in whole hog pork at 12 ounces. Admit, for the people at large, that beef, mutton, fish, &c. would make half their meat, again deduct half of this remainder for women and children not being as great consumers as men, and the result would be three ounces per day, or say 64 pounds each per annum for the whole population of the



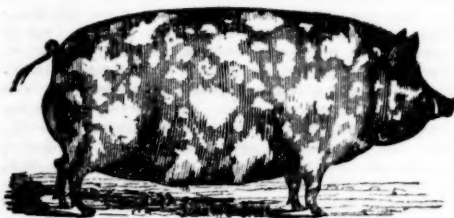
United States. But for fear of an over estimate, we will suppose the consumption only 2 ounces per day—this amounts to 730 million pounds, or 3,650,000 barrels, which at eight dollars per barrel, (the probable average price, taking one year with another,) would make 29,200,000 dollars as the value of our pork consumption alone. Now many of our most experienced stock growers assert, that the improved races of swine will make three times as much meat from the same quantity of food, that those of the unimproved will; and again, the quality of the meat is so much superior that it will go twice as far in giving vigor and sustaining life. Experience has convinced me of the truth of these assertions; but, lest we should claim too much, we will allow only one-half saved, or say, in round numbers, fifteen millions of dollars. What a vast sum to be annually lost to America, just for want of a little attention in breeding pigs! Why, if properly applied, it would soon finish all our projected rail-roads and canals, or keep a good school one-half of the year in every district in the union.

Of all the known varieties of the domesticated hog, the Chinese has long been celebrated as decidedly the most perfect in shape and general conformation. How this breed was first produced, it is impossible now to say; there is no doubt, however, in my mind, but that, like the Arabian horse, it was *original*, and that the best specimens to be found on the Eastern Continent, are the identical counterparts of the pair that descended with Noah from the ark, after the subsiding of the deluge, and that all other varieties have deteriorated by running wild, or from carelessness in feeding, and neglect and inattention in properly breeding,—the goodness of the Deity never forming in the beginning the detestable brute that we see roaming in every direction the country round, like a veritable cannibal, seeking who and what he may devour. But be this as it may, the Chinese, as we find them scattered along the coasts of the Celestial Empire, and on the adjacent islands, vary greatly in size, and somewhat in shape, and are of every shade of color, from pure white up to jet black. The most approved varieties, however, may be thus described. A fine head and snout, with the face somewhat dishd, small upright ears, a somewhat short and very thick deep carcass, large hams and shoulders, short legs, delicate feet, soft thin hair and skin, a tendency to grow and fatten almost upon air alone, and to give when slaughtered very little offal, and the sweetest and most delicate of pork.

Below are the portraits of a pair of the improved Chinese (figs. 2 and 3,) in the writer's possession, bred by himself, and faithfully sketched after the originals, by his friend Mr. Julius Gerber, and engraved by Buffalo's promising young artist, Mr. J. W. Orr. They are represented in no better flesh than they will always attain when full grown, running in a common grass pasture during the summer, or with the most moderate allowance of food in the winter.



[Fig. 2.]—Maid of Erie.



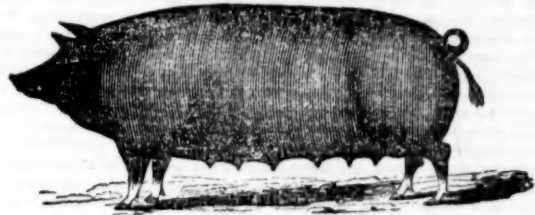
[Fig. 3.]—Seneca Chief.

tub, they seem never so happy as when left alone to sleep, and dream, and cogitate on deep philosophy. Their meat is exceedingly delicate and sweet. In England it bears the highest price, and is called par excellence the "gentleman's pork." The improved Chinese will give a greater amount of pork for their food than any other breed in existence; and it is in allusion to this circumstance that the able editor of the Maine Farmer, with no less truth than justice, calls them the "poor man's hog." Boars of this breed are highly recommended to cross with the common hog of the country, as they most rapidly improve the quality of the meat of their progeny, fine their points, give breadth and depth to the carcass, quiet their dispositions, and add a greater tendency to mature quick, and fatten kindly, and at the same increase their sizes.

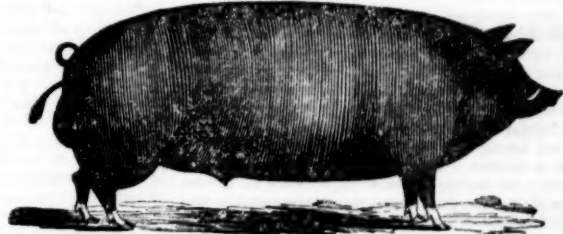
Many attempts have been made in Europe to improve the breed of the native swine, by selections and otherwise; but so far as the writer has been able to follow them up, there has been little success, and that little very slowly obtained, except only where resort has been had immediately to the Chinese boar. This is particularly the case with England, whose efforts seem to have carried her, in this department, as far beyond her neighbors as in that of the improvement of horses, cattle and sheep. Every county there boasts of its breed of swine, and certainly many are very deserving, having derived their chief excellence from a cross more or less deep with the large white Chinese boar. Of these are the Leicester, the Bedford or Woburn, the Sussex and Cheshire. But the most decided improvement, and which by the care and skill of recent breeders, has now nearly attained perfection, was that of the black Siamese boar upon the old stock of Berkshire county. This, I understand, began about forty years since. The Berkshires were then mostly a long, large, coarse, lop eared hog, of a sandy or reddish brown, or white, with black spots, and coming up, not unfrequently, to the high weights of 800, and even 1,000 pounds. But it was a slow feeder, long attaining to maturity, an enormous consumer, and in common with most of England's other varieties, an unprofitable beast. Yet possessing rather thicker hams and shoulders than the other kinds, a longer, fuller body, and its meat abounding greatly in lean, the little, short, fat, black mouse-eared Siamese told well in the cross; and thus was produced the dark, splendid Berkshire, that at present occupies the same rank among hogs that the Durhams do among cattle. They mature quickly, and like the Chinese, can be fattened at any age, and still may be selected, when desirable, for great sizes; are prolific breeders and the best of nurses; thrifty, hardy, and of most excellent constitution. They are fine in their points, possessing remarkable thickness in the ham and shoulder, and show a round, smooth barrel of good length, that gives a large proportion of side pork. They have little offal, thin rind and hair, and few or no bristles. The meat abounds still greatly in muscle, and the hams particularly are highly prized, commanding an extra price in market, being very tender, juicy and lean.

As now bred, the Berkshires vary somewhat in size, appearance and maturity. Those with the finest heads, a dishd face, and rather upright than forward ears, with a snigger shoulder and ham, and shorter body, most resemble the Siamese an-

cestor, and therefore are quickest to mature, and probably give the most delicate meat, and to one satisfied with moderate size, are undoubtedly to be preferred. Barrows of this description, if well fed till 18 months old, easily attain 300 to 400 pounds, and weights within these limits are the most eagerly sought for at the Smithfield market, and are probably on the whole the most profitable for both consumer and producer. Others, generally of a straight nose, with a coarser head, and ears protruding well forward over the eye, or slightly lopped, with greater length of body, incline more to the original Berkshires, attain higher weights, and require a longer time to mature. There are individuals, however, occasionally possessing all the fine requisites of the former selections, together with the large size of the latter. Of this class the figures below are supposed to be as fine specimens as any at present in the United States, (figs. 4 and 5.)



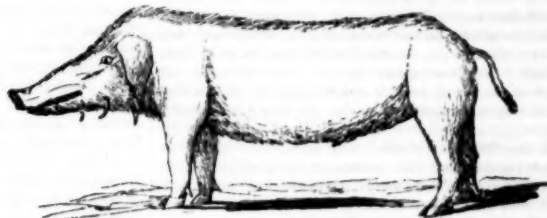
[Fig. 4.]—Raven Hair.



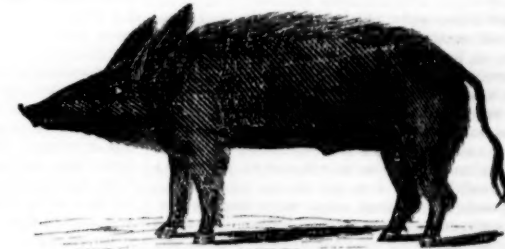
[Fig. 5.]—Black Warrior.

This pair is among the writer's breeding stock, and he believes that he can confidently appeal to the numerous gentlemen who have favored his piggery with a call, to attest to the faithfulness of the portraits. They are not considered fat at all for Berkshires, but merely in good store order, and were two years old last spring. The live weight of the sow is now about 450 pounds, that of the boar 500 pounds. They have never been pushed at all in their feed, but kept steadily along, and when grown, in fair condition, will weigh respectively 600 and 700 pounds at least, and probably something more.

We now come to a pair of fatting barrows of the unimproved breeds of swine.—They abound throughout the country, under a variety of most euphous names, but we may suppose those of Alligator and Landpike about as appropriate to them as any others that could well be applied. They are not, however, introduced here for derision, or for the purpose of getting up a caricature, as the originals can easily be found; but to show that there is *something in breed*, and to illustrate the difference between a good animal and a poor one of the same variety. They have long,



[Fig. 6.]—Alligator.



[Fig. 7.]—Landpike.

peaked snouts, coarse heads, thin chests and narrow shoulders, sharp backs, slab sides, steep rumps, and meagre diminutive hams, big legs, clumped feet, with the hide of a rhinoceros, and the hair and bristles of a porcupine, and as thick and shaggy as a bear's. How can such animals thrive, and above all ever be fattened? To attempt to make them do either, as the writer found to his cost in his first efforts at farming, were time, and money, and produce thrown away. They have no capacity at digestion, and concocting their food in the stomach for nourishment; and if they had, to the formation of what would it all go? Pork? No, indeed—but offal, bones, rind, bristles and hair, with a narrow streak of gristle underneath, and a still narrower line of lean, both as tough and rank as whiteleather, and about as incapable of being masticated; and if it were not, must require a vast deal of *larding* to make it sustain human life. I have been obliged to purchase it occasionally for my workmen, and before they could possibly get up a fry for breakfast, twice the weight in lard from other hogs had to be added to it; and as for baking or boiling, one might as well undertake to stew an alligator's hide itself. In disposition, they are like the Ishmaelites of old—their snouts are against every man, and every man's hand is against them. No reasonable fence can stop them, but ever restive and uneasy, they rove about seeking plunder; squalling, grunting, rooting, pawing, always in mischief and always destroying. Enormous gormandizers, yet never satisfied; but like Pharaoh's lean kine, they lick their jaws for more, and show in their miserable carcasses no return for the food consumed. In short, the more a man possesses of such stock, the worse he is off, and he had far better sell his produce at any price—yes, even his

corn at a dime a bushel, than to put it into such totally worthless brutes.

#### Of the Choice of Stock, Breeding and Rearing.

**THE BOAR.**—After obtaining as many other good points as possible in choosing a boar, reference should then be had to a strong, masculine appearance in him, even at the risk of getting some little coarseness, as this denotes great vigor and constitution. Both sexes of the improved breeds of swine are, if allowed, precocious in breeding. To prevent this, the boar pig must be separated from the sows, as soon at least as he has attained four months of age, and it is better thenceforward to keep him entirely by himself. For this purpose, a close covered, roomy pen, with a plank floor, and plenty of litter is provided for him to feed and sleep in, and retire to whenever he pleases, and made comfortably warm in winter and cool in summer. This communicates, by a door that can be opened and shut at pleasure, with a yard for him to root and exercise in, and a strong upright post or two to rub and scratch against, and a slough hole to cool and refresh himself by wallowing at his pleasure during hot weather. If this yard could be extended to a good grass pasture, with clear, sweet water passing through, it would be still better for the boar to have a run there, and more conducive to his health, vigor and longevity.

He should never be permitted to be used till seven months old at least, and it would be much better that he were allowed to run till nine months. But if commencing at seven months, he should cover sparingly, say not more than fifteen to twenty sows, till a year old, and these as distant apart as possible, not more than three in any single week. From this time, till he has attained pretty full vigor, which for the Chinese I should call twelve, and the Berkshire at eighteen months age, he may be used a little more freely. His spring seasons might then vary from twenty to thirty sows, and the fall nearly double this number. The sow should be introduced to him when in heat, and allowed but one coitus, and then be immediately taken away. It has generally been noted, that one covering produces a greater number, and stronger offspring than two or three, and that an *ad libitum* service is alike pernicious to all parties.

During his seasons, if pretty freely used, he should be kept up, and with care, being fed at least three times a day, about, or quite as much as he will eat. The best aliment for him then is boiled or soaked corn, with plenty of pure fresh water, and for variety some swill from the house, slightly thickened with meal, (oat is the best,) and a few raw or boiled vegetable roots. As an antidote to disease, and to give tone to the appetite and assist digestion, a table spoonful of sulphur is occasionally put in his food; salt also is placed where he can get at it when he pleases, and charcoal or small chunks of rotten wood, together with a handful of crushed bones. Between the seasons his feed is made lighter, but sufficiently nutritious to keep him in fair store order, and more exercise, and a greater run as above is recommended. A good animal thus treated, may last ten years or more, and get excellent stock from first to last. I have lately heard of boars having been effective till past twenty, and can see no good reason to doubt the truth of the communication, as the hog has been known both in ancient and modern times, to have frequently attained the age of thirty years. The duration of their services, and goodness of their stock, depends mainly upon their treatment. Great error is committed in irregularity of feeding, and overtasking their procreative powers, and hence the frequent disappointments in distinguished animals, not producing stock at all equal to themselves.

**THE SOW.**—When growing pigs or shoats, and kept up in pens, not more than half a dozen sows ought to be herded together, yet in large pastures any reasonable number may be suffered to associate. But when full grown, and especially if of a large size, two at most is sufficient together in confinement, and it would be still better that each one had an apartment to itself in the piggery. Unless the pig was lean, and the object was to somewhat fatten her, it ought not to be allowed to breed, if a Chinese, till twelve, and if a Berkshire, till eighteen months old; and if something extra large was wanted, defer their coming in still six months longer. There is then no check in youth, and the first litter of pigs is usually as fine and as large as any subsequent ones. The period of their gestation is sixteen weeks, and the time that they are stunted to the boar should be set down, and one month at least previous to farrowing, each sow should be taken up and occupy a place alone, either in pasture or in pen, similar to that described for the boar, be kept in good order, and strictly watched when expected to bring forth. As soon as dropped, see that the pigs are cleaned and take the teat, and the dam rid of the placenta, and that carried off and buried. She should then be supplied with short cut litter in a moderate quantity, so that her young will not get tangled in it and be smothered. The watching should continue several days, till the pigs are strong and lively, especially if the sow be full grown and heavy, otherwise they are in danger of being lam and trod upon, and killed. One pig more saved than leaving the sow to herself, amply repays all this extra attention.

The sows being somewhat feverish at farrowing, should have what water they please to drink about blood warm, but very little food, and that of a light kind the first twenty-four hours. After this their feed may be gradually strengthened, and when the pigs get a week old, the dam should be fed all it will eat three times a

day without cloying. All the whey and milk that can be spared, with a mixture of oat and barley with pea or Indian meal, of one part of either of the latter to three parts of the former, is highly recommended for nursery, together with an equal quantity of boiled or steamed vegetables. As soon as the pigs will eat, a small open box frame should be placed in the pen, under which they could run and be separate from the sows, a trough set there, and milk with a light mixture of meal and cooked vegetable roots poured out for them. This greatly relieves the sow, and adds much to the growth of the pigs; they wean then without scouring, losing condition in the least, or being checked in their growth.

It is generally thought that pigs do as well to be weaned at six weeks old as later, for the little milk that each then gets is obtained by more or less quarreling, and adds a distaste to their other food; besides it is a great consideration to get them off the sow as soon as possible. Eight or ten great pigs tugging at her breast for two or three months, is hard to be borne, and is frequently very pernicious to her teats. In weaning, all but one should be taken off, put the dam on short allowance, and in two days take the remaining pig away, allowing it at first to draw the breast twice a day, and then diminish till once in two or three days during a week, then turn the sow out to grass and leave off entirely, and commence gradually to put her into condition again. The Berkshires especially are great milkers, and must be well attended to at weaning time, or the breast will fill, become caked and swollen, and finally ulcerate, and be the cause sometimes of the death of the sow. Two litters are allowed per annum, and a preference for farrowing in this climate is given to the months of April and September. Farther south, later and earlier will answer. A pig when first dropped is a very tender animal, and if the weather be too cold it will perish; the dam also is likely to become ravenous and devour her offspring, or refuse to nurse it.

After being weaned, pigs should be fed upon cooked food, at least for a few days; they will then very rarely scour, and if they have a dry warm place to sleep in covered from the weather, will not take cold or be afflicted with swollen head and throat, that too often destroys them. Night air is very pernicious to young pigs, and is the direct cause of most of the ills that effect them. In order to give them an handsome shape and good growth, some attention must be had to their food and accommodation. To their snug sleeping apartment in the winter, a large dry yard that the sun will shine in when out, should be appended for exercise, and in summer they ought to have the run of a good grass or clover lot, with pure water if possible passing through it. The best food that can then be given them, is as much milk, whey and house swill as can be had, and a mixture of oat and Indian meal about half and half, with flaxseed ground with it, at the rate of a pint or so to the bushel, or for want of this a quart or two of oat meal may be substituted. All this, and more especially if it can be cooked beforehand, mixed with an equal quantity of steamed roots of any kind, such as potatoes, beets, &c., makes the most palatable, healthful and thriving food for young pigs or old, that I know of. There is a very great saving in cooking food for hogs, and making it pretty thin with water; the liquid alone, in this case, seems to go farther with them than the whole of the food uncooked. Repeated experiments have established the fact, that water, under these circumstances, becomes very nutritious. Shorts and bran, so much given to pigs, is most miserable food alone, and especially if used without being cooked. It almost invariably scours them, and under the most favorable circumstances I could never see much thrift from the feeding. Cold swill, and above all if any frozen, is very pernicious; it is the cause of several diseases, especially that of casting the inwards, and ought never to be fed. When confined, either as store animals or fattening, all hogs should have a little sulphur and salt occasionally in their food, with pure water to drink at all seasons once or twice a day, and charcoal or chunks of rotten wood thrown to them, and be allowed now and then to come to the ground a short time for the purpose of rooting and eating dirt. They may not fat, or rather *bloat up*, quite so fast for this, but their flesh will be much superior, and the poor animal will be kept free from the fever that otherwise so much torments it; and indeed, it is believed, except in rare cases, of all other diseases.

Of the pathology of the hog, the writer acknowledges almost total ignorance; he trusts, however, that some one well qualified will soon be induced to come forward, and treat the subject with the ability that it so highly merits. In so doing, not only the more extensive breeder, but the public at large would be placed under great obligations, for there are few families in the United States, out of our large cities, that, to use the Irish expression, do not "live neatly and keep their pig."

A. B. ALLEN.

Buffalo, December, 1839.

#### Book Farming.

There are two classes of farmers who, it strikes me, err equally,—those who indiscriminately denounce all "book farming"—and those, on the other hand, who grasp at every visionary theory, every ill-advised conjecture, because it is ushered into the world in the columns of an agricultural publication. The first class seem to think truth ceases to become so, by being printed; the other, that speculation is made to assume the importance of established fact, by the same process.—A farmer, otherwise an intelligent man, not long since

declared to me his firm conviction "that one could learn nothing about farming from newspapers." I inquired of him if, by his own practice and experience in husbandry, he had arrived at any conclusions which he considered true and undeniable. He had. I then asked him if he should communicate to me in a letter those facts, would they become any less true and undeniable? Certainly not. Well, then, should I cause your letter to be published in the *Cultivator*, would your facts cease to be facts by being printed? The man was convinced.—His error, and it is the error of thousands, lay in supposing that all that is printed on the subject must necessarily be theoretical. Too much undoubtedly is so. I have known farmers err as far on the side of credulity, as the one I have alluded to did on the side of scepticism. I knew one who destroyed the lives of several valuable animals, by a process which he found recommended by a correspondent in an agricultural paper—recommended, doubtless, without being subjected to the test of accurate experiment.

It is the duty of the conductors of the press to be exceedingly careful on this point, not to *mislead*, where they assume to *instruct*. The line between theory and established fact, should be kept broad and well defined.—Yet a moment's reflection will convince us, that the conductor of the press should not reject all theory, merely as such. This would throw a serious obstacle in the way of improvement and discovery. There are many who have the ability to form useful projects, who have not the means of putting their projects in execution, and until this is done, they are theorists. Franklin, when he went into the fields and let fly his kite, was but a theorist; but when the electric spark answered to his touch, theory was converted into discovery. Fulton was a theorist until the first steamboat\* ploughed the waters of the Seine, in 1803. Sir Humphrey Davy, so far as agriculture was concerned, was but a theorist, yet he has conferred more lasting benefits on it, as a science, than any other man of his day. The celebrated Arthur Young, whose authority on the subject of husbandry is universally received and acknowledged, was mainly a theorist. The remark will be found generally true, though there are striking exceptions to it, that the most important discoveries in the various departments of agriculture have not been made fortuitously, but have been the fruits of theories, founded on scientific principles, matured by observation and analogy, and finally ascertained to be genuine by the touchstone of experiment.

The reader, as well as the conductor of the press, is called upon to draw the line of demarcation between the spurious and the true, the applicable and the inapplicable, whether presented in the garb of facts or speculation.—Facts may mislead as well as theories. Indeed, I apprehend it is a mistake of quite as frequent occurrence. The same process will ordinarily produce the same result, but the minute and less apparent circumstances which in many cases govern it, are liable to vary, producing disappointment, which to the mass is entirely unexplainable. Nature operates upon fixed principles, but her agents, unlike those of science, are beyond the control of man, neither can they be brought to bear in the precise determinate proportions which give accuracy to the experiments of the chemist. We cannot control the weather—cold and heat, the rain and the winds—neither can we always bring to a given standard the precise properties or combinations of soil, or even, with the exception of a few scientific men, decide in what proportion they actually exist.

But the class of facts by far the most calculated to mislead, are those which are introduced from the practice of nations whose systems, institutions, circumstances of population, relations of property, &c., differ so essentially from our own. Agriculture has arrived at a higher pitch of improvement in many parts of Europe than in our own new and sparsely inhabited country; and to England, our Fatherland, especially, have we been in the habit of looking for the model of every thing that is correct in husbandry. This is to some extent proper, but the examples of English agriculturists are always to be received with due allowance for the decided difference between the circumstances which affect the agriculture of the two countries. There, land is every thing, labor nothing—here the case is exactly reversed, labor is every thing, land nothing. If the wealthy English agriculturist, situated where money ordinarily bears a rate of interest not exceeding four or five per cent.; where products find a readier and far better market than in the United States; where labor costs scarcely a tithe as much, can afford to bestow immense labor on drainage; on the collection and preparation of manures; on a system of tillage generally not falling far short of horticulture in the nicety or the expense of its operations—it by no means follows that the American farmer would find it profitable to follow his example. The draining, in many instances, would exceed the value of the land when drained; the crop would not pay for the manure; and the annual income of the farm would fall short of the laborers' wages. This subject was alluded to in a late number of the *Genesee Farmer*. I hope to see it more elaborately followed up hereafter by some competent pen.

If theory and fact are both so liable to mislead, the conductors and the readers of agricultural newspapers are called upon, as I have before remarked, to exercise a sound discretion in deciding what they shall receive or reject. We should apply the same rules of evidence to statements submitted to us, that we should deem ne-

\* The first practically successful steamboat.



cessary in business or commercial transactions. If A. B. or C. publish an alleged fact, purporting, for instance, to be the result of an experiment tried by him, he becomes a witness before the jury of the public. His veracity, ability to conduct the experiment accurately, and interest in the ultimate decision, should all, so far as is practicable, be weighed in the balance. We may be compelled to believe when no adequate rationale can as yet be presented; but in no case contrary to the dictates of reason or common sense. Even in the former case, the proof should be strong and decisive. Concomitant circumstances, their bearing and effect, should be carefully investigated. If a theory is presented, let the reader soberly weigh the reasons on which it is based, and any experiments to test the truth of either theory or alleged fact, should ordinarily be conducted on a scale so limited, that failure would involve us in no serious loss. But it is unnecessary to follow up this branch of the subject. Every man's common sense, if he will allow it to influence him, will direct him in the right course.

Let no man say that agricultural publications are valueless because mistakes and inaccuracies will creep into them. There may be some chaff, agriculturally speaking, but the bulk is wheat—sterling wheat. A condemnation on such grounds will be found far too sweeping. Who will pretend that the advice of a sound, practical, intelligent farmer is valueless on the subject of farming? Yet there is no man who does not fall into errors. And if the advice of one such farmer is valuable, let it be borne in mind that many such contribute to the columns of such a paper as the *Cultivator*. Who will pretend that the writings of such men as Marshall, Sinclair, Dickson, London, Berry and Youatt, in England—Von Thier, Du Hamel, Tessier and Chapal, on the Continent—Lorrain, Livingston, Colman, Buel and—, in our own country are valueless? There can be no one so utterly ignorant, or so thoroughly prejudiced, as to believe this! The very proposition involves an absurdity—for it goes to say that talent, observation and experience are all worthless, and that all of them, brought to bear on one point, are capable of achieving nothing. It goes to say that a Davy or a Gay-Lussac, a Newton or a Leibnitz, were not qualified to communicate information in relation to the sciences in which they so eminently excelled!

One word as to agricultural newspapers. When politicians, literary men, religionists, and the champions of fifty different "reform" support their periodicals with so much zeal and *esprit du corps*, shall the farmer alone trust to the slow spread of oral communication between man and man, to learn the general success which attends his vocation—its advance or its retreat—its triumphs and its achievements? The spirit of the times forbid it.

H. S. R.

Cortlandville, Dec. 1839.

#### Management of Sheep—No. 8.

(Continued from the *Genesee Farmer*.)

MESSRS. EDITORS—As a former correspondent of the *Genesee Farmer*, I beg leave to tender you, with much cordiality and sincerity, the usual compliments of the season. Permit me also to express my unqualified pleasure and congratulations on the marriage of the *Genesee Farmer* to the *Cultivator*—a union of the East with the West—May your lives long be spared, gentlemen, editors and proprietors, to sow in the columns of the consolidated paper, the well selected seed of agricultural knowledge; and by proper nourishment may it bring forth fruit abundantly to the farmer—some twenty—some fifty—and some an hundred fold.

Agricultural correspondents of the east and west can now meet each other on common ground, to measure their blades of zeal in the great cause of husbandry; therefore, as an humble follower and well wisher of this cause, I respectfully call on all my brother correspondents of the west, to come forth and do joint battle with the east, in striking down those gigantic foes to a perfect system of agriculture—ignorance, and its legitimate offspring, prejudice and error. The field is the *Cultivator*—and thrice honored be he, who is boldest, and is found in the thickest of the fight.

The theme I have chosen is indicated by the caption. You are aware, as well as the readers of your late paper, that I have already written much on this subject, but it is not, as yet, quite threadbare. It will be followed up in the order as announced at the conclusion of the last essay; consequently *winter management of sheep* is the subject of the present chapter; and with your approbation, will hereafter contribute farther on the great and important subject of sheep husbandry. Before entering into details, it will be well to state, that I shall, as heretofore, confine myself to communicating the results of my own experience; that the information conveyed is now, and will be, based on facts—what my own eyes have seen and hands handled, therefore in all respects practical; and furthermore, that my system of management is more particularly applicable to the finer grades of sheep.

In common with good keeping, were I asked what is the indispensable and most important matter connected with successful management of sheep during the winter season, I would unhesitatingly reply, *protection*; and were I asked again and again, the answer would be the same, *protection—protection*. By the great mass of farmers, however, it is wholly disregarded; and from this cause greater losses have accrued than from any other within my knowledge. But in former numbers, the importance of attention to it I have dwelt upon,

bordering on prolixity. In view, however, of its necessity, permit me to ride my favorite hobby a short distance, in order to show up the advantages to those who have not been readers of the *Farmer*.

The positions I have sustained, are as follows: that protection is a *prevention of disease*, therefore saving of life: *improvement of fleece: increase of its weight: saving of provender: increased number of lambs: and not to protect sheep, is a violation of humanity.*

As briefly as possible, I will cite some facts in support of each. Before protecting my flock, which varied in numbers, from 900 to 1400, averaging, say 1200—the loss amounted to from 70 to 100 during the winter, and once rose to 150. Since protection, now four years, the average number wintered has been 1800, and the average loss of each winter amounted to only 31; being less than 1.34 per cent.

In proof of the second position, I should be compelled to introduce two invoices, showing the sorts of two clips, one of which was shorn the year before protection, and the other immediately following, which would occupy too much space. If any are desirous of investigating, they will find the record on the sorter's books of the Middlesex Co. at Lowell, or in the May No. of the *Genesee Farmer*.

As regards the third, for several years before my flocks were protected, the highest average yield of wool per head, was 2 lbs. 9 oz. The clip which followed the first winter of sheltering, which was the terrible one of 1835 and '36, the average was 2 lbs. 10 1/2 oz. The next clip was an average of 2 lbs. 14 oz.; the next 2 lbs. 12 3/4 oz., and the last, which was the lightest, generally throughout the country, shorn for many years, the average was 2 lbs. 10 1/2 oz.; consequently the aggregate gain amounts to, of four clips, 1252 lbs. This is, of course, in exclusion of tag wool, the average amount of which, each year, was about 480 lbs. The cause of this increase is to be attributed to the *better condition* which can be sustained by means of protection.

In reference to the fourth, saving of provender—protection has been the cause, to my certain knowledge, of saving much hay, but from want of actual experiment, am unable to say precisely how much. One ton to the hundred, however, I deem a fair estimate. Of oats, which I fed liberally before protection, the amount saved is equivalent to 500 bushels each year; and yet, as a confirmation of the above remark, that *sheltering is a means of keeping up good condition*, my sheep have been in finer order than when they were grained; showing, notwithstanding the virtue of grain, that there is *more virtue in warm shelter*.

The fifth proposition, that protection conduces to increase the number of lambs, is accounted for by reason of the greater strength and vigor of the ewes, arising from good condition, which, and I say it most emphatically again, can only be *uniformly sustained*, but by means of sheltering. Since the adoption of this improved system, the average increase of lambs, from the same number of ewes, has been over 100 each year; formerly the loss, from the emaciated condition of the ewes, was very large; so much so, that it would be mortifying indeed to make the number known.

To substantiate the last position, I boldly put the question, is humanity to the domestic animals, which Providence in his wisdom and goodness designed for the use of man, a *virtue*? Will any one but a barbarian say nay? Then let none evade and outrage this christian duty by permitting their flocks to be exposed to the terrible storms of winter, for it is a violation of humanity in the *worst form*.

Having broached the important matter of protection, I deem it essential, as coming within the scope of my subject, to mention the kind of shelter of which I make use.

They are barns, and varying in size; several of which are 30 feet by 20, with 14 feet posts; and others 36 by 20, with 15 feet posts; six feet of the lower part of the last mentioned is taken off for granaries. It should be stated that the first size named, are not long enough to contain a sufficiency of hay for 100 sheep, which is the largest number I permit to herd in the winter; a remedy will be found, however, by adding two feet to the width and two feet to the posts. The largest size afford room enough for the necessary quantity of hay for the above number of sheep, provided it is not of a coarse quality, and the winter an ordinary one. They all front the south, on which side are boards made to shove like bars; a space, however, of some six or eight feet is always open to admit of the sheep going in or out at pleasure. It ought to have been stated before this, that the protecting apartment is formed by a vacancy of four and a half feet from the ground, and of course, that above it the hay is stored. On a distant farm I have several barns constructed after the "Massachusetts mode," standing on side hills, the inclinations of which are such, that it was only necessary to excavate the ground in rear, in order to form shutters. The size of these is 36 by 45 feet, and by means of a division-wall afford ample accommodation for 100 sheep each. On three sides of each apartment are fixed box racks, which are used only when the weather is severely cold or stormy; at such times the advantages of feeding under cover cannot be too highly appreciated.

The average cost of the barns, first described, was about \$55 each; they were built by the job, and when lumber was bearing a price below its present value; and the entire expense of all my sheep buildings approximates \$1000. But in No. Four of this series I entered into the most minute calculation derived from my books and invoices, wherein it is shown that my gains

already, in consequence of protection, arising from saving of life, increase of wool, &c. &c., have reimbursed this expense, with an overplus of \$1427. I refer for particulars of this estimate to No. 14 of the *Weekly Genesee Farmer*, or May No. of the *Monthly*, 1839. But notwithstanding this powerful *pecuniary* argument in favor of protection, there will be found thousands of your readers too sceptical to be willing to incur the same expense that I have undergone, and therefore the following mode of building cheap shelters is respectfully recommended.

When securing hay, if stacked, build two pens for the reception of the bottoms of the stacks four and a half feet high, and place them about 35 feet apart, in or nearly an east and west line: then take two poles of sufficient length to reach from pen to pen, resting the ends on the tops of each pen; the centre of the poles to be supported by crotches, and well secured in the ground. A sufficient number of rails or poles will then be required to support the straw which will be necessary for a covering. I will also suggest that the straw ought to be secured by placing a few rails on the top of it, otherwise violent winds will displace it. The rear of the hovel, which of course should be the north side, can be made of boards, and must be tight; if it is not, snow when drifting will be certain to find its way in, and often occasion the necessity of its removal. If boards cannot be readily obtained for the back, racks made of rails or poles, and stuffed with straw will answer quite as well. I wish to be understood that all this is not to be done at the time of building the stack, by no means; all that is required at that time, is to place the long poles on the tops of the pens; the residue can be constructed when convenience permits. I also recommend the erection of several racks to be filled with straw, called "wind breakers." I will not mention where they ought to stand, as practical farmers know pretty well the point a north-wester is apt to bite hardest. The necessity of attention to this is obvious, to protect the sheep when feeding, and waste of hay by being blown away by high winds. What straw is required for the above purposes, should be old, or partly rotted; otherwise sheep will be often employed in gnawing holes. The size of the hovel, as described, is calculated for 100 sheep.

With all those who choose to adopt this plan, or follow my example of building barns, the location should be considered. If the necessary quantity of straw is used for littering under and about the hovels or barns, much manure will accumulate; and therefore, the situation should be on the borders of the meadows, at least if placed on them at all; otherwise when the manure is carted away in the spring they will be much trodden and cut up.

I have already swelled this essay quite beyond the limits I had prescribed, and without entering into such particulars in relation to winter management as I intended: what has been recommended however, every farmer will find it highly advantageous in a pecuniary point of view, to put immediately into practice. Much remains to be said on this subject, which will be accomplished in my next chapter; and in the mean time, gentlemen, will do all in my power to aid the circulation of the "consolidated" *Cultivator*.

Your friend,

L. A. M.

Lansing, Tompkins Co., N. Y.

#### Prospects of the Silk Culture in the U. States.

The close of the year, and the entrance upon a new one, presents a convenient point from which to take a view of some of the prominent subjects connected with the cultivation of the soil, which are engaging the attention of our countrymen; as, at such a time, we naturally look back upon the past, and from it form anticipations of the future. Among these subjects there is no one of more absorbing interest, at this time, than that of the *Cultivation of Silk*.

As there exists much incredulity in the minds of many on the subject, and doubt of our being able to produce silk profitably; as the spirit that has been so extensively awakened, by some has been deemed a *mania*, and the whole matter ridiculed as "a humbug," got up merely for the purpose of speculation, by designing men, it may be useful to take an impartial view of the subject, inquire what has been done, not simply in the raising and sale of trees, but in the growing and manufacture of silk, and from the *practical results*, as the only correct and safe criterion, to form our judgment of the case.

The greater part of this incredulity arises from a want of information, and from that suspicion with which men are apt to view any new enterprise. This distrust, this disposition to doubt, we are far from censuring, provided there is at the same time, a mind open to conviction. It argues a becoming prudence and caution. But we do disapprove of this wholesale condemning of a thing without evidence, without even examination. There needs but the knowledge of facts, and an impartial examination of the subject of the silk culture on its own merits, to convince every unprejudiced mind, even the most sceptical, not only that it is a branch of business from which may be derived great profit to those who engage in it understandingly, but one of great national importance. Many individuals who have been entirely sceptical on the subject, and the most strenuous opposers of the silk business, yielding conviction to the light of truth, are now its warmest friends and advocates, and are preparing to embark in it extensively.

To enter into a full examination of the subject, would require more space than can be devoted to a single essay, in the columns of an agricultural journal; inasmuch as it would require the introduction of a multitude of

statistical facts in relation to the silk business in our country. But a few of these we shall present, for the consideration of the candid.

1. That silk can be raised with perfect ease, that our climate, from north to south, is admirably adapted to the constitution and health of the worm, far better than that of Europe, and to the growth of the Mulberry tree in its different varieties, has been satisfactorily proved by thousands of experiments. While in Europe, owing to the humidity of their climate, nearly one-half of the crop of worms usually die from disease, and they are obliged to have their cocoons nicely regulated in their temperature by the thermometer, here, owing to the dryness and warmth of our atmosphere, with proper care, scarce a worm dies from disease; and a building of the cheapest construction—any out-house, shed or barn—answers perfectly well for a cocoonery. That the silk made in this country, is of the very best quality, for fineness, lustre and strength, equal to any in the world, has been decided by competent judges. Specimens of raw silk have been sent to European manufacturers, and pronounced by them to be superior; and in our own manufactures it is much preferred, and receives a higher price, by a dollar or two on a pound, than the foreign article. There is no more mystery or difficulty in raising the worms, than in raising chickens; children, females, aged and infirm persons are competent to the work, and it requires no more skill to reel the silk from the cocoons, than any of our intelligent females may acquire with a little practice. Persons have succeeded perfectly well, even to the reeling and spinning of the silk into beautiful sewing silk, who never saw a silkworm or a cocoon before, and who had no other instruction than what they had derived from silk publications. If, then, abundance of the raw material, of the best quality, may be produced without any difficulty, what should hinder us from becoming a silk growing country, and from manufacturing it, not only into sewing silk, but into all the variety of silk stuffs used by our people; and thus save the millions which are annually drained from us, to pay foreigners for raising and manufacturing our silk?

2. Silk may be raised with profit. There is no branch of business which yields so large profits on the capital invested and the labor bestowed. It requires, indeed, but a small amount of capital to go into it extensively; a few acres of land, a few trees to begin with, and the necessary fixtures for feeding worms. Hence it is admirably adapted to the small farmer, and persons of limited means. It is peculiarly of a domestic character, and may be pursued with profit in the family, by employing the children and females, without detriment to other branches of the labor of the farm. As a practical illustration of this, we will mention a fact stated in one of our silk periodicals. A Connecticut farmer, the past season, "hatched out some worms to be attended by his three children, who were going to school every day, and they gathered leaves and fed the worms in the morning before leaving home—returned at noon to feed them again, and at night completed the feeding for the day. The worms had no attention but what was given by these children, and the silk, when reeled, was sold for one hundred and seventy-five dollars. This was more than the farmer made from an excellent dairy farm, (on which several crops were cultivated besides,) from any other one crop to which his attention was directed." That silk, from the common white Italian Mulberry, may be raised with profit, has long since been demonstrated in Connecticut, where, in the town of Mansfield, originally one of the poorest agricultural towns in the state—the land so poor and broken that our farmers would hardly take it as a gift, and be obliged to cultivate it—the culture of silk has, for half a century, formed the chief source of the wealth and prosperity of its inhabitants. Silk, to the amount of many thousands of dollars, has been raised in a single year. The farmers are above-board, out of debt, with money to lend; and their daughters have something comfortable laid by, to present their husbands when they marry, as a marriage gift, in the form of money at interest, the product of their own labor in feeding the silk worm and reeling and spinning its tiny fibre. Who would not value such a wife, not only for her solid charms, but for her habits of industry, her spirit of independence, and her knowledge and skill in a branch of business which is destined to be the source of incalculable blessings to our country?

But the introduction of the Chinese Mulberry, (the *Morus multicaulis* and the Canton) has produced a new era in the silk business in the United States; and by its tested superiority over every other kind, and its rapid and extensive propagation and distribution through the land, is hastening the period when we shall be a silk-growing country. Its large, nutritious and abundant foliage, and the consequent great saving of labor in picking the leaves, (a saving of nearly nine-tenths,) and its immediate fitness for use, greatly enhance the profits of the silk culture. Fears have been entertained that it would prove too tender for our climate; but placed on a high and dry soil, not very rich, it stands even our severest northern winters. But even were we obliged to take the trees up every fall, as we do a crop of potatoes, and plant again in the spring, it would yield an ample return of profits in the crop of silk. A field of *Morus multicaulis*, cultivated in this way, would require but little more labor than a crop of corn. The high prices which the tree has commanded have resulted from the conviction of its great value for producing silk. It stands upon its own intrinsic merits, upon the solid basis of silk. We are not in favor of making large estimates; but at the lowest, the profits of the silk culture with the *multicaulis*, are ample—greater

than can be realized from any other agricultural pursuit. By actual experiment, it has been demonstrated, that from fifty to one hundred pounds of silk may be raised from an acre of ground the first year, planted about as thick as you would plant corn or potatoes; at an expense of not more than \$2 per pound. This silk, reeled, is now worth \$6 per pound in its raw state, or \$10 if converted into sewing silk. Even at the past and present high prices for the tree, a very large per centage may be realized the first season, by the crop of silk that may be raised. An intelligent dealer in the *Morus multicaulis* has informed us, that he had made sales to a considerable amount this fall, at fifty cents a tree, on a credit, and that he had given purchasers the choice, either to pay the whole in money, or half the amount in money, and the other half in the crop of silk which could be raised the first year, by feeding as many worms as the trees would supply with leaves; the purchaser thus making fifty per cent. on his investment the first year. A number of sales of this kind he had made; and in one instance, the farmer—who had had some experience in feeding worms—sitting down with his pencil and paper, and making a calculation, chose to pay him the whole in cash. The growing and sale of the *Morus multicaulis*, has by no means been all speculation. Large permanent plantations have been made, for raising silk. Whatever have been the motives which have influenced those who have gone into the business, it has resulted in good to the country; it has awakened attention to the subject, and enlisted a deep interest, far and wide, in our citizens; it has elicited much light and knowledge, experimental and practical; called forth the inventive energies of our people, in the construction and improvement of silk machinery, and by the rapid multiplication and diffusion of the tree which forms the food of the silk worm, is putting it in our power soon to be independent of Europe. We prophesy that in ten years, we shall raise, if not manufacture, our own silk, and that in fifteen years, raw silk will form as important an article for foreign exportation, as does now our cotton; and this without encroaching upon, or diminishing our other great staples. Instead of, as now, being tributary to Europe, she shall be tributary to us, for the material which will form her finest and most beautiful silk fabrics; and the millions of specie, which have been drained from our country—the life's blood of our commerce—to pay our foreign debt, producing national bankruptcy and ruin, shall flow back into our coffers, and circulate freely through every artery of trade, giving health and vigor to the whole. By some, we may be deemed visionary, and pronounced a false prophet. Be it so. Whoever lives will see. Our anticipations of the future are not formed from fancy, but from fact—from a careful and attentive examination of the subject, and observation of the progress of the silk culture in our country. We judge of the future from a knowledge of the past—from what has already been done, and is now doing.

3. And what, it may be asked, has been accomplished? We answer, the feasibility and profitability of the silk culture has been satisfactorily proved, as we have shown. Thousands, through the whole length and breadth of our country, have engaged, or are preparing to engage, in the business. Immense numbers of worms have been fed with perfect success the past season; no less than four hundred cocoons have been erected, and preparations are making to feed worms on the most extensive scale the coming season: hundreds of acres will be planted with the *Morus multicaulis*, not for the purpose of speculation in the sale of the trees, but for raising silk. Societies have been organized for the promotion of the object, and recently a National Society, at Philadelphia, at the head of which are some of the most distinguished men of our country: Legislative bounties have been granted in several states, to encourage the culture of silk, and we trust our own will not be behind her sister states in encouraging, by legislative aid, the noble enterprise. Several manufactories have been established, and are in successful operation, producing fabrics which our wives and daughters need not be ashamed to wear, and which only want a supply of the American raw material, to rival the silks of Europe. With these cheering facts before us, is there not ground for the most favorable anticipations? Who that is acquainted with the genius and character of our people, for enterprise and perseverance, can doubt, that with the impulse now given to the silk culture in our country, its onward course is to a high destination?

4. And is there an American bosom, in which dwells one spark of patriotism and philanthropy, but that would most ardently wish this?

As statesmen and political economists, is it a wise policy in us to pay out millions to other nations for that which we can just as well produce ourselves? To run in debt to Europe for a single article, to an amount far exceeding all our exports, with the single exception of cotton, 18 or 20 millions of dollars per annum;—to make the balance of trade against us, and thus impoverish ourselves to enrich others?

As philanthropists, can we do otherwise than give our best wishes and cordial aid to a branch of industry which will give employment and a comfortable support to thousands in our land, whom poverty, misfortune, age and infirmity have placed in necessitous circumstances; to the children of the poor in our large towns and cities, who are growing up in idleness and vice; to females who are dependent upon the painful and precarious labors of the needle for a scanty subsistence, and to the aged and infirm, who are disqualified for more laborious employment? In the just language of the editor of the

Silk Farmer, "In all our large cities, where female suffering is the most intense, and in every agricultural district of our widely extended country, the blessings attendant on the progress of the silk culture, will fall with grateful beneficence upon this dependent and neglected portion of our population. A child of twelve years old, or an aged person, unable to follow any laborious employment, will attend during the feeding season to as many worms as will make twenty-five pounds of raw silk. The same individual will reel a pound of silk per day. Cannot the reader of this recall to his remembrance some destitute family—some widow with a numerous group of suffering children—to whom a domestic employment of this kind would indeed be a blessing? Or some lonely and aged female, too feeble for labor, too good for the poor-house, whom a steady fire-side occupation at the silk-reel, might lift up into the sunshine of grateful independence? Considerations of this kind expand the sympathies of the human heart, and make the subject as interesting to feeling and philanthropy, as it ought to be to private interest or commercial enterprise."

There is but one point more on which we wish to offer a remark; and that is, the benefit that would result to the silk culture, by laying a duty on foreign silks. This benefit would immediately be felt; it would give a new impulse to the silk business, check the influx of foreign silks, and the consequent draining of our country of its money—enable our manufacturers to compete with those of Europe, and establish the silk culture on a firm and immovable basis. It is certainly the true policy of a government to cherish its home industry, to encourage its own manufactures, by protective duties. We hope that Congress, consulting the true interests of the nation, will take the subject into early consideration, and lay at least a moderate duty on foreign silks. In the mean while, let the friends of the cause make known their wishes, by memorializing that honorable body, to whom is confided the interests of the nation. With this remark, we leave the subject to abler pens; hoping that, though we may not have thrown any new light on it, nor convinced a single sceptic, we may at least have presented the subject in such a view as to ensure the favorable consideration of all.

W. W. B.

Hammondsport, Dec. 3, 1833.

#### Union of the Cultivator and Genesee Farmer.

Messrs. Editors—The great utility of agricultural periodicals, circulated among the Farming community, is a fact which none but those who refuse to read them will question; and it is believed, so far as I am acquainted, that "The Genesee Farmer" stood first, and was more pre-eminently useful, than any other of the various publications of the kind in the country. It was so considered by myself, as well as by many others. It was better adapted to the agriculture of western New York. The editor was a resident among us,—was acquainted with our soil and climate; and what was more, he knew from personal observation wherein we failed in good management. And when I first heard that my old and tried friend, my counsellor and director, was soon to stop his friendly visits, I was sorry. I did very much regret that the days of the Genesee Farmer were numbered, and would be shortly finished. Yet one reflection on this matter gave me some consolation, to wit, that the whole life of this noble philanthropist,—all his acts and deeds—all his counsels, warnings, admonitions and recommendations, from his first breath to the termination of his useful life, are in my possession. These I can peruse and re-peruse, and thus will I yet draw, from his useful instructions, many valuable admonitions in my noble calling.

But on more mature reflection, I considered that, although my old friend was to be consigned to the tomb, yet, since he is to rise again, though under another name, and to reside in another city, he will come among us again with the same spirit, and with the same partiality to our profession. Since it is to be only a transmigration,—since he is to re-appear with all his excellence of matter, and more of it,—with possibly more talent, knowledge and vigor, I am satisfied with the arrangement. And I hope the new publication will prove as advantageous to the editors and publishers, as I am sure it will to its readers.

#### Importance of Good Fences.

It is an old maxim that "Experience is the best school-master;" and it is only by practical experience that we are to become established in the best course of agricultural improvement. I am aware there are certain fixed principles which may be learned from books, and which always remain the same in all countries and in all ages; yet to know how to apply these principles, is the result of experience. I am now 49 years of age, though it is but seven years since I commenced my agricultural life. During these seven years I have read much and reflected much, made many observations, and performed much labor. Though I have but begun to learn the secrets of this great and most important calling, and am thus but poorly qualified to instruct my brethren of the same profession, yet, with your leave, I will offer a few hints which are the result of my hitherto short agricultural experience and observation.

And first, I have learned the importance of good fences. It is in vain, and worse than in vain, to plant and sow, having but a poor enclosure of the field. There is



nothing so vexatious and so trying to patience, as the destruction of a crop when half grown, by cattle and hogs. I have seen, in more cases than one, a promising field of corn literally destroyed for the want of a proper fence. To prevent such losses and drawbacks upon my labors, I have adopted the plan of setting the stakes perpendicularly, dressing the upper end about two feet, to fit a 3/4 inch augur hole, put on a tie, two rails below the top, and drive the stakes about twelve inches into the ground. Stakes and ties white oak. There are several advantages in this manner of setting stakes. All the rails, from top to bottom of the fence, are confined, and the stakes thus set are not in the way of the plough or of the scythe.

#### Of Stock and the manner of Feeding.

I have learned that a good cow in good condition will more readily sell for forty dollars, than a poor cow in low flesh will bring twenty dollars. A good cow, well fed, is more profitable than two poor ones. Hence the importance of keeping such stock as will pay well for first rate keep. We are too careless on this subject. A great proportion of the farm stock is of that worthless character, that its best returns will not pay for the food consumed. But still, I believe there is more carelessness and indifference, more censurable negligence, and perhaps greater call for reform, in the manner in which our stock is protected and fed, than in the quality of the breed. Within the last two years, in the course of business, I have visited many farmers in different parts of the country, and for the most part during severe winter weather. I have been into the house, barn, cattle yard and fields. And I am ashamed to tell the result of my observations. I am exceedingly mortified to see, and even to think of such slovenliness and poverty, even among men esteemed respectable. I mean not, however, poverty absolute, but poverty of the carcasses of cattle, sheep, and horses. And, sirs, I would only whisper these facts to you, were it not that I believe there is a remedy. And that remedy is in diffusing information. And I feel it my duty to proclaim such facts upon the house-tops. I would go into the minutia of such management. I would draw such a picture of improvidence and recklessness, as should prove a looking glass, in which every farmer, if he saw not himself, would at least see more or less of his neighbors.

And first of the cattle yard, which, in some cases, was a lot, of six, eight, or ten acres, and the barn somewhere near the centre. In other cases there was a pretended enclosure about the barn, but did not afford the least hindrance to all the stock, from rambling the whole farm over in search of scanty food and water. In these cattle yards I have seen dead sheep, which, from the appearance of those alive, one would expect had died of starvation. Colts and calves, which might be expected to be found in the same condition in a few days. Cows which, instead of furnishing the family with milk, looked as if they themselves would require to be fed with milk, to preserve their lives a month longer. Not a stable, cow-house, hovel, or shelter of any kind, to protect them from the chilling winds and storms of winter. I have seen the owner of such a stock of cattle and sheep, scatter hay of the most worthless kind about the yard, which was filled with mud and filth. The stronger of the herd would, with apparent reluctance, eat a portion of the hay, and trample the balance in the filth of the yard; while the weaker were driven away to shiver in the corners of the fence.

Such management I have seen with my own eyes, or I would not believe it. Such, to be sure, is not the general character of our farmers, but far too many would see themselves in the above description. Now, sirs, what do you suppose was the first question I should ask such a man? I will tell you. It was this: "Do you take the Genesee Farmer?" And can you imagine what was his reply? Of course you can. He says, "No, I do not; I have thought several times I would, but my family expenses are large, and I cannot afford it." "What! not fifty cents a year?" said I. "Suppose you sell one of those pigs for fifty cents, give the same food to the other three, and subscribe for the Farmer. Here, (continued his visitor,) you have three or four sons between twelve and twenty-one years of age, and it appears to me exceedingly important that they should have the opportunity of reading and informing themselves of the very great improvements in agriculture, which have been made within the last few years." But all to no purpose. Ignorant he was, and ignorant he will be.

But I rejoice to say I have visited farmers of a different character. And with your approbation, I will give you a little sketch of the management of one of them, with whom I am personally acquainted. I went also into his house, barn and cattle yard, for he had one deserving the name, on two sides of which were barns well filled; on one of the other sides, a good frame cow-house, and on the other side a large stack of straw, and a well-house, covering a good well of water and a pump, and in which well-house were deposited ploughs, harrows, cultivators, roller, wagon, &c. In the yard were good substantial racks for coarse fodder, such as corn stalks, straw, &c. But no mud or water. This was all absorbed by the straw and litter which was scattered liberally about the yard. I went with him to his barn at night, (for he attends to these matters himself,) to observe his manner of doing things. And when he opened his stable door, first a large pair of oxen, next several cows, all in such condition as butchers would not complain of, marched into the stable, and each to the proper stall, in the most perfect order and regularity, where they were tied with ropes,

standing to their knees in dry straw litter. Then he took a basket, and went into a cellar adjoining the stable, and brought out sugar beets, and fed to each milch cow a half bushel, first cutting them in a box standing on the barn floor, directly in front of the stable, with an instrument resembling a large family chopping knife, the edge straight and about fifteen inches in length, and the handle about three feet in length. In the same manner, and from the same cellar, did he feed to his oxen and other cattle the same quantity of ruta bage turneps.

I requested of this farmer a statement of his opinion of the root culture, and the comparative value of roots and hay; also his manner of wintering his stock. And I was so well pleased with his views and his practice, that I am inclined to give it to the public through the Cultivator. It was in substance as follows:—He says, "In the first place, I keep no more stock than I can keep well. As to the feeding of milch cows, I commence in September with a liberal supply of pumpkins, which I continue till the first of December, and then commence with sugar beets, in preference to turneps, because the turneps give a bad flavor to the milk and butter. The sugar beets I continue all winter, half a bushel per day to each cow. When I put up my cows at night, I first feed them their beets, and in the course of the evening feed them with good clover and timothy hay. In the morning give them corn stalks, and through the day feed with straw, plentifully scattered in the yard. And I find by experience, that I can keep more stock in this manner, than to feed hay only. And besides, I am doubly paid for the cost of the roots, in the increased quantity of milk. And with this feed, together with good water in the yard, and a decent application of the card every morning, my cows are always in good flesh, and, as may be supposed, are always glad to see me. I feed my oxen and calves in the same manner with turneps."

"My manner of feeding my sheep is as follows:—They are kept in yards well protected from winds and storms. They are fed in boxes made perfectly tight, very accessible, and yet so constructed that they cannot get into them. In these boxes I feed in the morning, at the rate of one peck of corn to a hundred sheep, and at evening 1 1/2 bushels ruta bage turneps, cut fine and salted. This is all the feed they get, except a liberal supply of straw of the different kinds scattered about the yards."

Perhaps some of your readers may at first object to this manner of feeding sheep, thinking the expense greater than to keep on hay. But suppose we make an estimate for 130 days, say from 1st Dec. to 1st April.

130 pecks of corn, or 32 1/2 bushels, at 4s. ....	\$16 25
195 bushels turneps, 1s. ....	24 38
Total expense of keeping 100 sheep 130 days, It is generally estimated that ten sheep will consume as much hay as one cow, and some think more, which, at 1 1/2 tons for every ten sheep, would require fifteen tons for one hundred sheep, which, at ten dollars per ton, is.....	\$40 63 150 00

Then would there not be a saving of..... \$106 37 in the keeping of 100 sheep for one winter?

Again. Suppose we compute the quantity of land which would be occupied in these two cases. Fifteen tons of hay, at an average yield of one and a half tons per acre, would require ten acres of land to furnish hay for the hundred sheep. But at a very moderate calculation, one acre of corn will furnish the 32 1/2 bushels, and the corn fodder into the bargain. And one-fourth of an acre of turneps will furnish the one hundred and ninety-five bushels. Thus have we not 8 1/4 acres of land to appropriate to other purposes? Or, if you please, let us put eight of the ten acres to corn, and the other two acres to turneps, and we shall have the means for keeping eight hundred sheep from the same quantity of land which would be required to keep one hundred upon hay; and the manure of the eight hundred sheep will keep the ten acres of land in good condition.

But enough for the present. Should you deem such communications conducive to the agricultural habits of the farming community, you may expect again to hear from your friend,

NIAGARA.

#### Rural Life.

MESSRS. GAYLORD AND TUCKER—For ages past the poets of all nations have sung to us of the charms and enjoyments of rural life; they have told us in their minstrelsy, that happiness has fled from the palaces of kings and has sought an asylum in the cottage of the peasant; they have told us, that

"Those who have wealth must be watchful and weary;  
Power, alas! nought but misery brings."

And philosophy, which has been but too frequently the inspiration of the muse in the garb of reason, has told us that seclusion from the world, in the pursuits of the field is the cradle of virtue, and the undisturbed repose of happiness and the choicest blessings of heaven. And time, which has often sanctioned by venerableness the grossest errors, and thrown a charm and loveliness around the delusions of fancy, has, in connection with the brilliant language and imagery of the poet and the philosopher, transmitted and sanctified to us the poet's goose quill dreams and experience; and the anomaly, strange as it may appear, is presented in this age of intelligence of man's feelings and knowledge being diametrically opposed upon

a mere matter of fact. For we now see, and have long seen, when we have divested ourselves of poetic delusions, and have looked at things with practical, common-sense eyes, as they have been and now are, that the cottage is generally the abode of contracted intellect, contracted virtue, and contracted happiness; and that the farmer is as likely to be immoral and irreligious as other members of society, and is generally less refined and less intelligent. I say not this to traduce or to detract, but to exhibit truth in its native simplicity, and to strip the syren song of the poet of its delusive attractions.

Rural life, or in plain English, the farmer's life, is not and never has been, productive of the virtue and happiness claimed for it by the ancient and modern bards; it has ever been a life of toil, of drudgery, of limited enjoyment, of uncultivated taste and rustic manners. But this state of things has resulted more from inattention to the cultivation of the mind and heart, and an enlightened understanding of his business, than from the actual occupation of the farmer. The proof of this assertion, if proof be necessary, is found in the fact that American Farmers are rising and improving, preparing to merit and assume a more exalted station in society.

The press, with a power almost omnipotent, is shedding abroad upon the world of mind, a mass of intelligence, practical and theoretical; grand and interesting; elevating, expanding, and refining the intellect; opening a more extended range of usefulness, and coming within the reach of all who will grasp at and possess it. The possession of these high intellectual attainments afforded by the press, gives worth, and interest, and enjoyment to the possessor, which the bare pursuit of the most useful avocations of life can never bestow. Such being the fact, it requires but little discernment to see that any one distinct class in society, which shall disregard the progress and dissemination of general intelligence; rejecting the advantages and improvements which it affords, will cease to be respected, as being destitute of those high intellectual attainments which are the powerful incentives to interest and action. Such, for ages past, has been the relative condition of the laboring classes. Compelled to labor as the only means of procuring a livelihood, little or no leisure was afforded for mental culture; and from the cost in times past attending the acquisition of knowledge, before the art of printing was discovered, and long after that period, the poor were completely shut out from the world of intelligence, and were consequently held and esteemed as almost a distinct race of beings, unworthy the kind regard and respectful consideration of the wealthy and the learned. But through the benign influence of the press a happier day is dawning upon the world; the laborer is becoming intelligent and respected; and the respect which is given to the laborer is extended to the labor; for in the same degree as the laborer is respected or despised, is the labor made respectable or despicable. And the farmer, who of all the laboring classes is universally acknowledged to be the most important and necessary to society, is assuming his proper rank among the honorable of the earth, with a speed proportionate to his march of mind, and his approximation to the high standard of intelligence established in society.

Every day is unfolding some new project for the more general diffusion of knowledge and its attendant blessings among the laboring classes. The last, most grand and efficient measure for this purpose in the state of New-York, has been the establishment of school district libraries; and if our farmers will second this wise enterprise of our government, by the continued application of the public funds to the purchase of new and valuable books, and making themselves masters, as they most certainly will, of their contents, how enlightened, how elevated and how influential must they now become. Then, indeed, may the beautiful roveries of the poet be verified. For intelligence establishes an elevated standard of morals, as ignorance does a low and contracted one; and upon the strict observance of moral and religious principles, depends man's greatest happiness.

Happiness, to be found, must be sought for in that mode of life, and in the possession and the practice of those things which all the wise and good of mankind have declared affords peace and tranquillity. It is often sought for, and thought to consist in an indulgence in the extravagant, evanescent and enervating luxuries of life. But, alas! how delusive the idea, and how ruinous in its consequences to that exalted happiness which depends upon a contented mind. Luxury has crept into society as an attendant upon wealth; but not necessarily, for in the hands of good men wealth is a source from which emanates a thousand blessings; but in the hands of bad men, a thousand evils flow therefrom. Therefore, it may be said, that wealth is not an evil, only as it is in evil hands to do evil. Yet, in another light, it may be said that wealth is the greatest evil in society; that in its influence upon the character and conduct of men, it is the most to be dreaded of all the agents that induce to action. It is powerfully calculated to weaken the bonds of fellow feeling—that feeling which is the basis of society, affording the sweetest enjoyments of life,—weakening it, by increasing the natural distance between man and his fellow man. It tends, directly and strongly, to detach the heart and the head from the social and religious feelings and duties of life, by substituting in their stead a wide and splendid variety of sensual enjoyments which centre in self. Here sensual enjoyments are of two kinds and characters, exerting two distinct evil influences upon society. One is purely animal, extending its ill fraught consequences immediately to those who indulge in it, and remotely to their offspring; as luxurious living, indolence, &c. The other

is of a mixed character, having its rise in a more morbid state of the feelings; it is that kind of enjoyment, *totally pernicious*, where self is gratified when others admire, not ourselves, but the gaudy trappings of dress and equipage which we put on. This latter species of enjoyment, which is superinduced by wealth, is most directly pernicious to our moral and religious principles and practices—to the cultivation of the mind and of the social and refined feelings of our nature, by directing our moral and intellectual powers to objects totally useless and unworthy their regard, and thus diverting them from the important considerations and duties of life. And extending, as it does, its malign influences, not only into the mansions of the wealthy,

"Where *cash* is real, and *dress* is *show* of worth,  
And he is *great* who claims a noble birth;"

but also into the more humble dwellings of the middling and lower classes of society, whose means are but the proceeds of their daily labor, where wisdom demands the expenditure of those means for the necessities of life, and for intellectual improvement, wealth may be considered as a positive and general evil to the whole community.

Religion, virtue, philanthropy, demand that this evil be stayed; that its demoralizing and enervating influences upon society be checked. And beginning, as the American Farmers are, to assume a station in society where they will exert a powerful influence upon all its institutions, manners and customs, to them, if to any, the world must look for an example which will roll back this inundating tide of moral and physical evil. As they are in their occupation the most essentially useful, so let their example, in their "march to empire," be most essentially serviceable, bearing on their standard the word *UTILITY*, as a guide to all they do.

Respectfully yours,

EDWARD WILBUR.

P. S. Regretted, as is the removal of the late Mr. Buel, (formerly known as the editor of the *Cultivator*), from his post of usefulness in the agricultural world, it becomes, on the other hand, a matter of gratification to the patrons of that paper, that his place is so ably filled by the talented editors of the *Genesee Farmer*. May you long continue in your new and "more extended field of usefulness," to exert your talents for the good of mankind, and receive as a reward, *not wealth*, but the gratitude of those you serve.

E. W.

Pittsford, Dec. 4, 1839.

#### Oak Lands for Wheat.

MESSES. GAYLORD AND TUCKER—A few days since I took a short excursion into the northwest corner of Ontario county, on to a tract of land long known by the name of Hopper Hills, and was agreeably surprised at the thrift and elegant appearance of the farm buildings, and the apparent happiness and prosperity of the inhabitants. I formerly knew this tract, and recollect well the character it bore, being proverbially a haunt for foxes, and the last resort of those poverty stricken souls who did not like to emigrate so far as to be out of the reach of the *good creature*, whiskey. These hills are not so remarkable for their height, as for the fantastic shapes into which they are thrown,—resembling a lake in a storm covered with bubbles; reminding us of our youthful poetic reading lessons—"Hills peep o'er hills, and Alps on Alps arise." These are sparsely timbered with scrub white oak, without stone or water. The soil is a coarse gravel, sandy, with a slight mixture of clay. The general appearance of the tract in its wild state, was sterile and forbidding. And now, as if by enchantment, these scrub oaks have given place to highly cultivated and beautiful farms. These farms bear, on the face of them, most indubitable proof of the causes which have rendered their possessors thrifty and independent, in the luxuriant fields of wheat which in every direction meet the eye. Indeed wheat and clover appeared almost exclusively grown, for the raising of which the soil is most abundantly qualified.

And now the question naturally arises, What has brought these lands into use? And why, if they are now so valuable, were they not taken up in the first settlement of the country? To the first question I would say, that our system of Internal Improvement has had a great effect upon such lands. Since the completion of the Erie Canal, wheat has been in constantly increasing demand, and at very fair prices. The use of plaster, threshing machines, improved implements of husbandry—have each tended to facilitate the raising of wheat, and of consequence brought into use all lands capable of producing it. Had we no plows but the old bull plow to till our lands; had we no pound out our wheat with flails; were we ignorant of the wonders which plaster produces on light soils; and above all, had we no canals to transport our produce to market, these lands would in all probability have continued to be a resort for foxes, producing nothing but winter greens and whortle berries. The second question requires to be considered somewhat more at length. Those familiar with new countries know well, that much stress is laid upon the timber covering the land, as indicating the quality of the soil. I believe this is considered by writers on agriculture to be a just criterion. The first settlers of the Genesee country chose lands timbered with maple, beech, bass, elm, and occasionally large and thrifty black and white oaks; and the soil was a rich muck, highly productive in the grasses, corn, wheat, oats, &c. On such lands were plenty of good building timber, rails, &c., and the produce was just such as the circumstances of the inhabitants required. These lands may have deteriorated a little by

forty years' culture, yet with the improved husbandry of the present age, they will now produce equal to any other soils whatever. But they do not now do so. I believe that no one will pretend that large crops of corn and wheat are now as frequently grown as thirty years ago. To what extent the climate affects our crops, by the alteration occasioned in it by the clearing up of our forests, I am not prepared to say. Certain it is, that blight, mildew, rust, winter killing, frosts, &c., have rendered the raising of good crops on such soils, rather an uncertain business. Yet, when all these causes are avoided, and all circumstances are favorable, as in the year 1833, we get very heavy crops. I am not capable of investigating fully the reasons why our heavy timbered soils are more subject to blight, rust and frosts, than the lighter soils. The more obvious reasons are, that strong soils give a more rapid, luxuriant growth, and sudden changes in the weather are more sensibly felt. Clayey soils are retentive of moisture, and therefore very liable to heaving with the spring frosts. Rust and frost are the two worst enemies we have hitherto been called to contend with; and both of these are mostly avoided on the oak opening lands. Some persons not familiar with the Genesee country, may perhaps think that there is a deficiency of lime in our heavy timbered soils, and that that may be one cause of the failure in wheat. This is not the case. Lime abounds in all these lands. Our field stone are mostly lime. There are three grades of oak lands, varying very materially in their value for raising wheat. The first and best are called openings, and are supposed to have been annually burned over by the Indians. They are now covered (if not cleared) with a very thick growth of black and white oaks, from three to eight inches in diameter, and of a uniform height. The soil is very strong, having a greater mixture of clay, and the very best for wheat and clover. The second quality is such as first above described. The third grade differs but little from the second in the appearance of the timber, but the soil is very different. It is apparently white clay, having but little vegetable matter intermixed, and abounding with stone of a kind called shale or slate. Springs and marshy spots are very frequent, and the water is soft. Lands of this description are found in the southern tier of counties. They are considered poor wheat lands.

In conclusion I would say, that were I to select a farm for the growing of wheat as a principal business, I should choose oak opening land. Sheep husbandry is very well connected with raising wheat on such lands, and I know of no surer way of obtaining the *useful* than by raising of sheep and wheat.

Yours, &c.

MYRON ADAMS.

Ontario county, Dec. 1839.

#### Farm Wall.

Common stone wall, for durability, and an effectual security to crops, is not surpassed by any other kind of fence. The making of it is somewhat expensive, but the benefit, resulting from removing a useless incumbrance from our farms, more than counterbalances the expense.

Although the advantages of this kind of fence are obvious, yet with many, it is not in very high repute. They object, that it is every year falling down, and requires much labor to keep it in repair. This objection has some force from the fact that many of our walls in western New York are unskillfully built.

The stones in this region are not generally of the best kind, and wall built of them will not stand as well as wall in those parts of the country where the material is more abundant and of better form. But I know from actual experiment, that wall built as it should be, will make a very permanent fence and require but little repair.

Much of our wall in western New York is laid wrong side up, that is, the stones that are laid at the bottom should be laid at the top. The largest and best shaped stones are selected to be laid upon the ground, the next best for the second tier, and so on till the wall is topped out with small stones, unfit for the place. Although this, at first thought, might seem to be the best way of building, a little reflection and experience will teach a man that it is the very worst. Where will your round and cobble stones lie best? Is it not on the ground, where they will be firmly imbedded in earth and must be immovable? And will not your large and well shaped stones make a much better superstructure than the small cobble stones?

In many parts of New England, wall-laying is a trade; and I have observed that they select their poorest stones to lay upon the ground. They lay a broad foundation, and with small stones raise the wall from 8 to 12 inches high. This absorbs most of their poor stones.—They then select stones a size larger, and lay them in a double row on each side of the wall, and thus raise their wall 12 or 15 inches. They then select their longest and best stones, and lay them across the wall, so as to firmly bind together the two sides, reserving smaller but good shaped stones for completing the top of the structure.

The wall, when thus built, should be secured by plowing about three furrows on each side, and throwing up, with a shovel, the last furrow, so as to raise an embankment against the wall, at least a foot high. By this means the small stones are all covered, and laying beneath the surface, will be but little affected by frost, and will lie as firm as the best stones you could select. Even if they were no longer than the stones used on a McAdamized road, they would make a firmer and surer foundation than broad and flat stones. The small stones will settle about uniformly and equally into the earth, and being

pressed by larger stones above, will lie steady and unmoved in their place. But when large stones are laid upon the ground, the heaving of the frost, and the softness of the earth in a wet season, will cause them to settle more on one side than on the other, and thus tumble down the cobble stone structure above them.

The method of building wall here recommended, will, I think, commend itself to the reflecting and intelligent. But if any have doubts, I could easily remove them by showing them wall that has stood the test of time, remaining firm in its place, while wall laid in a different manner has become dilapidated.

There is another error in wall-laying that I would notice. Some take great pains to lay the smooth surfaces of the stones outward, so as to give a handsome face to the wall. To effect this, they often lay the stones in the most unfavorable position. I have often seen a long and smooth stone set up edgewise and lengthwise in a wall, which seldom fails to be crowded out by the pressure from above, to the ruin of the wall. But do the best you can, no great beauty can be given to a stone wall; and here, as in other cases, *utility* should not be sacrificed to *beauty*. That wall will eventually look best, that *lies* best.

In making wall, I direct to have every stone laid in a position so that it will lie most firmly in its own place, and bind together most effectually the stones beneath and about it, without regard to the beauty of the wall when completed.

Pittsford, Monroe Co., N. Y.

#### Improvement in Dressing Hogs.

JESSE BUEL, Esq.—None but those who have experienced it, can know the difficulty of enforcing good advice on the ignorant—particularly, if they are to pay any thing for it.

We have labored and argued with wealthy farmers, to convince them of the profit they would derive from taking the *Cultivator*. We believed what we said, when we told them it was worth the dollar for family reading, beyond the instruction in the better mode of farming.—Very few are willing to pay the dollar for it. If you would give it free of expense, they would read it, but that you ought not to do. We ask them, how an uncultivated mind can be better than an uncultivated farm, growing up with weeds and bushes of no profit? A man of a cultivated mind can improve a farm better than an ignorant man. We have endeavored to illustrate the subject to them, by pointing to the French peasantry of Lower Canada, where they are now farming with the same and similar tools, which their forefathers brought from France about two hundred years ago, on their first emigration to Canada.

To make it more plain—it requires four men and a woman there, to butcher a fat hog. One man to hold each leg of the hog—and, as they say the devil deceived the woman first, and that he is in the hog, so the woman, the wife, must take the knife and shed the blood of the hog, while the four men hold each a leg. The next process is, to light feathers, or other combustible matter, set on fire, hold the hog over the blaze, and singe off the hair. This is their mode of dressing their pork. This was the style, also, in the French West India Islands, half a century ago, and may be yet. These peasants would not pay a shilling for the *Cultivator*. They know nothing of the value of literature, and have no desire to improve. They do not know its value. We presume, therefore, it was the mode in France, when they emigrated from thence.

Our farmers are proud of the advances they have made beyond the Canadian, in scalding their hogs in a tub of boiling water.

Would it not be useful to our farmers, if they could learn to scald a hog of five or six hundred weight, with the aid of two men, without a tub, where it would require half a dozen men to lift and scald a hog of six hundred pounds, besides the expense of an extra tub, and at the hazard of scalding themselves in the process?

If such improvements are to be learned from reading, and the *Cultivator* is intended purposely to convey useful improvements in agriculture, and in ordinary, common life concerns, will it not be profitable to the farmer to pay one dollar a year to learn all the improvements through all the United States?

We see, that if a person is accidentally exposed to a sudden dash of boiling water, on his naked hands, or other naked skin, the heat evaporates so soon in the air, that it inflicts but slight injury to the skin and flesh.—But, if the boiling water happens to fall on the legs, covered with stockings, the stockings prevent the heat from escaping, so that the skin is certainly scalded severely, before the stocking can be removed. Let us learn from this, that boiling hot water, applied to the skin of a hog, will produce similar effects.

If a hog weighs six hundred pounds after he is slaughtered, two men can place him on a plank, or on boards laid on a common freight sled, which most farmers have. Then cover the body, or the upper side at least, and the legs and head, with some cloth that will set close, and woolen is the best, as it is not so good a conductor of heat as linen or cotton. Thick cotton, or double cotton may answer, but a horse blanket of woolen is best. When this is wrapped close to the hog, as the stocking is on the leg, so as to exclude the air, then pour on boiling hot water, sufficient to wet thoroughly the whole, and the blanket will retain the heat, so that it will soon scald the hog, and let the hair loose. Try, and if not all loose, cover and pour on more boiling water. When one side of the hog is cleaned, turn him over and treat the other side similarly.



If the hog be small, a blanket will cover the whole. He may be rolled in it.

If you put tar in the boiling water, or sprinkle fine powdered rosin on the hog, before you cover him, which is better, it will take off the scurf, and his skin will be as clean, after scalding off the hair, as a lady's hand.

Now is not this information alone worth the price of the Cultivator, to a farmer who fates the improved breed of hogs, which weigh from three to six hundred pounds?

A farmer who fattens such large hogs, will, I think, if he takes the Cultivator, and reads this mode of dressing them, acknowledge that he has reaped the value of the dollar paid for that useful paper. Women may clean the feet and head of the calf, in the same manner, if they please, and save much labor, which I know will be a boon to them, as they are more liberal and not advocates for extra labor.

In my former communication, you said the whale sails with his tail. I wrote *scula* with his tail, like as the boat is sculled by an oar over the stern, his tail being flat, like the oar.

Respectfully,

DAVID TOMLINSON.

Schenectady, 2d Dec., 1839.

#### The Root Culture.

MESSRS. GAYLORD AND TUCKER.—As you are to extend your usefulness to the farming community, by uniting with the Cultivator, I am disposed to go with you with my views occasionally. While you have been going through with the nine volumes of the Farmer, I have received each number with expectations to be well compensated for the trifling expense. I have perused its pages with pleasure and no small profit. The culture of roots has received considerable attention, but the subject has but just begun. I am of the opinion that in all grain growing districts the root culture will be considered second to no other crop, except wheat; not that roots will be turned to money as corn, barley and oats, but will aid the farmer to extend his wheat crop and increase his stock of cattle, sheep and hogs, and thereby increase the quantity of manure. With a good supply of manure, the root crop may be increased so that both sheep and hogs can be better carried through the winter on straw, chaff and roots, than on hay and grain, and at one half of the expense. Ruta бага for cattle, mangel wurtzel and sugar beet for sheep and hogs. Before we commence with roots, we must see if our soil is well adapted to roots. The turnep requires a sandy soil, but will make fair returns on a gravelly loam. Where clay, or clay loam, are the principal parts, turneps will not make good returns. The mangel wurtzel or sugar beet will do well on clay loam. Clover sod has been recommended for ruta бага. If it is free from other grasses it will do well; if made rich, twenty-five loads of manure to the acre has been recommended; if it is short, unfermented stable manure it will do. In wheat growing districts, where straw is freely used in the stable and yard, forty or fifty loads to the acre will well pay in the increased size of the roots. The 20th of June has been recommended as the best time for sowing ruta бага; for western New-York is too late. The dry and hot sun of July, gives the turnep fly a good chance to destroy the tender plants. The first of June will give a better crop. The average of seasons, if planted the middle of May, they will be less liable to be injured by the fly; but in this early planting they are more subject to run to neck and top, and are somewhat stringy, and not brittle and sweet as those planted the first of June. Some have raised their seed; such seed runs more to neck and top, and the roots are more branchy. One pound of seed to the acre is as good as two. If the fly attacks them they will as soon destroy them when two pounds are sown as one. I have tried manuring in the drills and spreading the manure over the ground. When I have a good supply of manure I prefer spreading. It is less labor and will do as well. As soon as the manure is spread, plow it under as smooth as possible; then roll and harrow with a light fine-tooth harrow, till it is completely mellowed; then we are ready for the seed, which should be sown the same day; rows twenty-eight inches apart, with a drill that can be built for \$2.50. I can sow as fast as I can walk. As soon as they are up so as to be followed in the row, they should be dressed out by going through with the cultivator or shovel plow and hoe; at the second dressing, they should be thinned out so as to be one foot apart, and after that they will want but little attention, if the land is not weedy. Many neglect hoeing too long, and then it is a slow business, and the turneps become stunted, which is very injurious to them.

Your obedient servant,

RAWSON HARMON, Jr.

Wheatland, Monroe Co. N. Y. Dec. 18, 1839.

#### Dutch Method of Yoking Oxen.

J. BURL, Esq.—Having a few days since received from your agent, Mr. C. H. Belcher, of Halifax, N. S. the New-York Cultivator, I am pleased to say it contains many valuable remarks, well worth the attention of the farmer.

On the 137th page of the 5th vol., I saw a cut representing the Spanish or Dutch mode of gearing oxen. For some years past, I have been in the habit of using oxen more or less, yoked both in the English yoke with bows, and in the Dutch yoke with straps, and now find the Dutch mode to be the best. This way of yoking, has the decided advantage over the English yoke; they are calculated to haul more, and they will back nearly as much as they will haul; and will travel with greater speed. Great care should be taken, in fitting the yoke to the head. And when the oxen are yoked, they stand as

close as their horns will admit of, so as not to touch.—Cattle yoked in this way can be worked in damp weather—whereas those in the English yoke are apt to get sore necks when used in damp or wet weather. Those who have been in the habit of using oxen yoked in the English yoke, will, on first using the Dutch yoke, despise it—but after a little practice, and the more they become acquainted with it, the better they will like it. I am quite sure those who give the Dutch or Spanish mode of yoking, a fair trial, will, in a short time, give it the preference. In this county, there are but few cattle worked any other way than by the horns. Oxen will often command a higher price yoked after the Dutch mode. They are well calculated for lumbermen.

Nova-Scotia has hitherto been deemed a barren soil. The husbandman has been well paid for his labor for the last year; the soil on which we tread is endowed with a thousand capabilities of production, which require only to be excited by our intelligence to yield the most ample return. It is not an uncommon yield for a wheat crop, to get 35 to 40 bushels wheat from an acre in the ordinary way in which our land is prepared.

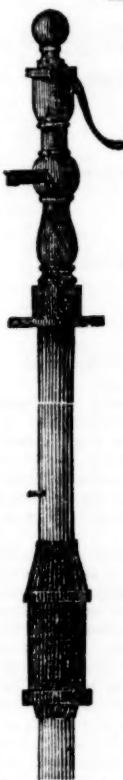
The district where I reside is situated about 30 miles from Liverpool, the market town for this county, where the farmer is enabled to realize a very good value for all kinds of produce he is able to spare off his farm, which I am pleased to say has increased for the last fifteen years; and should the New-York Cultivator be more generally taken, and the precepts thereof more generally adopted, even in this cold country, the farmer would soon be enabled to take three hogs to market where he now takes but one.

I am, sir, yours respectfully,

E. H. BURNABY.

Brookfield, Queens Co., Nova Scotia, 4th Novr. 1839.

#### Miner's Pump. [Fig. 8.]



In the 2d volume and 12th number of the Cultivator, I took occasion to notice this very superior and cheap article; a farther trial of one for four years, only confirms the very favorable opinion I then formed of them. I have now two in operation,—one in a cistern and the other in a well in my cattle yard, as much exposed as it possibly can be, and so far, as severe as the frost has been, no injury has been sustained, or its operation retarded.

If I should judge from the number which I have seen in use, in Albany, Troy, and adjacent towns, I should think they were getting into general use, and superseding the old fashioned lumberlike common pump. Wherever I have seen them in operation, I have invariably inquired how they liked them, and have always been answered in the affirmative.

The cut represents the well pump, and as the Cultivator, containing my former notice of it, may not be in the hands of all the present subscribers, I have transcribed the description as there given.

"This pump is intended to stand on the platform of the well or cistern, even with the surface of the ground; the part exposed is beautifully turned and painted. About ten feet below the base, and above the working box, is a small metallic tube, which lets off the water and prevents it from freezing. It is very light and easily removed; the wearing or operating parts being of cast iron, and the composition with which the wood pipe or tube is saturated, renders them durable, and obviates the evils so often charged on leaden pipes as injurious to health.

"The advantages of these pumps are: the very low price at which they are offered; their durability, perfect operation, and protection against frost." The joints are put together by means of screws on the ends, one end inserted in the other. This renders the transportation safe.

Since my former communication was published, I have been applied to, by letter, from several gentlemen from different sections, for farther information respecting its capacity; the quantity of water it will discharge in a given time; the distance they will lift water, and the price. To answer which, I applied to the manufacturer, H. Warren of Troy, for I had then only the cistern pump in use, who replied as follows:

"These pumps discharge water about the same in quantity for a given time, as a first rate one of the old wooden kind, but much easier. I never tried to ascertain more particularly as to time, quantity of water, &c. One man can pump, quite comfortably, with one of these, forty feet deep, and I do not care about selling them longer than that; although I have sold them seventy-five feet long; but such pumps go too hard to suit me, especially to send off.

"The price of well-pumps, delivered in Troy, with sixteen feet of pipe, below the platform, is \$15; all over sixteen feet, 18¢ cents per foot will be added—if under sixteen feet, the same deducted. For cistern pumps, from eight to ten feet in length, \$11; all over that 16¢

cents per foot. But for very long well-pumps, say from thirty to forty feet long, our prices are from two to five dollars additional to the above rates.

"I have no pumps, as yet, fitted up for operating in any other way than simply by hand."

Those gentlemen who are desirous of procuring a good, durable and cheap pump, not liable to get out of order, I would advise, by all means, to apply to H. Warren, 437 River-street, Troy, N. Y.

C. N. BEMENT.

Three Hills Farm, January, 1840.

#### Letter from Solon Robinson, Esq.

EDITORS OF THE CULTIVATOR:

Doubts and fears came over my mind, on seeing the announcement of the death of that most useful, and one of the greatest friends of the agricultural community, the late editor of this paper. But could I be assured of life until such time as my memory would be crowned with such honors as this nation have universally poured out of sorrowing hearts upon his, I would ask no greater fame, or proud memorial for my children, than he has left for his. May the mantle of their father rest upon them, and may they be possessed of that father's meekness to wear it becomingly. No doubt but it troubled his last moments, as to what should be the fate of his darling journal. Whether it would be able to sustain life when its heart was taken away, or whether it would follow him to that cold and silent tomb. How it must have brightened his mind at that dark hour, could he have foreseen the present bright prospects, that are now dawning anew upon this paper. No step could have been taken by those into whose hands it fell, so well calculated to carry out the good intentions of its founder, as this one of uniting it with the Genesee Farmer. A consolidation of interest will create an expansion of usefulness. The business is arranged so late, that perhaps many at a distance will not be able to become acquainted with the fact in time to partake of the benefits the present season, but I am sure that much good will come of the union.

Enclosed I send you a list of names which I shall hold myself responsible for, though I have not had an opportunity of seeing many of the persons.

I wish those who are anxious to extend the circulation of the paper, would act a little more upon my recommendation in the November No. Induce people to take the paper, money or no money—I will advance the money, and take my pay of subscribers in any thing that grows by cultivation.

Friends of agricultural improvement, common schools and common sense, be up and doing—doing good—cause this paper to circulate—to be read—and those that read, must, will, shall improve. And upon your death bed you will remember with gratitude, the founder of this paper, and I hope also with ample reason therefor, the present editors, that they have been the means of not only increasing your own happiness, but of enabling you to do so much good to so many of your fellow creatures.

Let every subscriber who is able, take two papers, one to preserve and bind, and one on purpose to lend. Let them also be introduced into common schools.

Gentlemen editors and proprietors, my best wishes are with you.

Most respectfully,

SOLON ROBINSON.

Lake C. H. Ia. Dec. 14, 1839.

#### Preserving Hams.

MESSRS. EDITORS—Various opinions are afloat in the world, respecting the best method for preserving hams for summer use. Every lover of ham, no doubt, has a way of his own. But as new inventions are every day coming out, I wish to give my opinion upon a plan for saving hams, that will keep them through the summer just as good and palatable as when first taken from the smoke-house. For the benefit of the readers of the Cultivator, I will give you the recipe for making the brine, and if any should think it worth trying, they will find it to be the best way in which hams can be preserved.

8 gallons of water,  
16 lbs. of salt,  
 $\frac{1}{2}$  gallon of molasses,  
 $\frac{1}{4}$  lb. of salt petre,

and so on in proportion for a less or greater quantity as you may have to save. Hams preserved in this way, will keep through the summer, and I have known them to be kept till winter, and be perfectly good. About the first of March (or sooner, if you please,) the hams should be taken out of the brine, and washed perfectly clean. Then prepare the smoke-house for smoking them. Various opinions have been formed in regard to smoking hams. Some think a smoke-house ought to be perfectly tight, and others think the more open a smoke-house is, the better. I do not think the building that is intended for smoking meat should be tight. The hams are more liable to injury, and are not so good, as those that are smoked in an open building, where the air can have free access. The best material for making smoke to smoke hams, is corn cobs. They make the meat taste better, in my opinion, than any thing else we can procure, though other materials are used, such as chips, wood, &c., but nothing is so good as cobs. About four weeks is long enough to smoke hams; and if the smoke-house be a good one, the hams can remain in it till warm weather. As soon as the warm weather commences, the hams must be taken out; and if it is desired to keep them through the summer, they should be encased in small cotton sacks, which should afterwards be tho-

roughly covered with a lime white-wash. Then hang them up in a cool place, and whenever you want ham you can have it, and that which is good and palatable. I have practiced the above method for several years, and know of no better way of preserving hams, though many may differ with me. If there be any such, I should be happy to have their opinions given through the columns of the Cultivator. W. S. T.

#### Culture of Indian Corn.

Mr. JESSE BUEL.—As I have been a constant reader of the Cultivator, I often find the inquiry from your different correspondents, respecting the best method of raising a crop of corn. I therefore send you a statement of the soil, management and profit of one acre, planted by me with corn the present season. The soil, two-thirds of it, was a warm gravel; the other third was low, wet, and covered with rushes and wild grass, with a very tough sod; but I was careful to put two good underdrains through it, which left it a rich black mould. About the first of May I drew twenty-two loads of unfermented manure, each load containing thirty-five bushels, and spread it evenly over the acre. I then plowed before the manure had time to dry; then dragged lengthways of the furrows; planted the 9th of May, with Dutch corn, the hills three feet apart each way, making 4840 hills, with six kernels in a hill. It was attacked by the grub as soon as it made its appearance above ground, at which time I spread twelve bushels of unleached ashes upon it, which checked them a little, but they succeeded in destroying 70 hills, leaving only 4770. Those were hoed and thinned to four stalks in each hill, June 6th; then I sowed two bushels of plaster upon the hills, and hoed again July 2nd; put no more earth to the hills than was taken away; went through with the cultivator both ways, four times—June 1st and 6th, July 1st and 12th. On the 14th of September I cut up and shocked the corn, and on the 28th finished husking and housing it.

Upon one square rod, of twenty hills, and one fourth of a hill, of the best of the low ground, grew seventy pounds of ears, equal to one hundred and forty-eight bushels per acre. The whole product was one hundred and twenty bushels.

COST OF CULTIVATION.	
One day plowing.....	\$2 00
Harrowing half a day.....	1 00
22 loads of manure.....	11 00
Planting, 2 days.....	1 50
Seed corn.....	50
Hoe and cultivator, 2 days.....	2 00
Hoeing, 4 days.....	3 00
12 bushels ashes and 2 bushels plaster.....	1 70
Spreading ashes and plaster.....	1 00
Cutting and shocking.....	1 50
Husking and housing, 7 days.....	5 25
Carting stalks.....	75
Threshing, 3 days.....	2 30
Interest on land.....	3 50

Total cost, \$37 00

PRODUCT.	
115 bushels of first rate corn.....	
Five bushels of second rate.....	
Stalks, four loads.....	

WILLIAM INGELL.

Volney, Oneida co. N. Y. Dec. 9, 1833.

I hereby certify, that I am personally acquainted with the above named William Ingell, and believe him to be a person of truth and veracity, and that his statements may be depended on.

R. D. HUBBARD, Justice of the Peace.

#### Experiment with Potatoes.

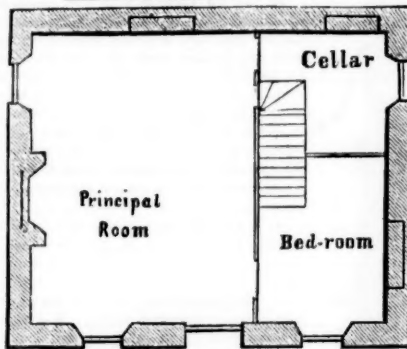
MESSRS. EDITORS.—Farmers are generally aware that the potato is not produced on the proper roots of the plant, or those devoted to nutrition, but on side shoots from the main stem, above the roots proper, and nearer the surface of the earth. It has been stated that De Candolle, taking the hint from this production of the tubers, and conceiving that the shoots still farther from the roots on the main stem, if covered with earth, would furnish tubers instead of leaves, actually succeeded in growing them, for considerable distances on the main stems, by repeated coverings of them with earth. A writer on vegetable physiology, in the Farmer's Register, basing his opinions, it is presumed, on this peculiar law of the plant, recommended the following method as probably the best for the cultivation of that root.

"Let the ground be prepared in the usual way; lay the potatoes in the bottom of the furrow, and cover them to the depth of three or four inches, with coarse manure or leaves, and then with two or three inches of earth.—After the stalks are six or eight inches above ground, cover all except their ends in the same manner; and perhaps this process may be advantageously repeated a third time; after which they should be suffered to go to seed. The first covering should, unless the land be very rich, consist in part of manure, in order to furnish nourishment to the plant; the second and third may consist of straw or leaves, as the principal object is to keep the earth loose, and protect the tubers from the action of the sun."

In order to test the correctness or fallacy of these opinions, I determined last spring to partially repeat the experiments of De Candolle, and selected for the purpose two hills on my bed of early potatoes in the garden. The ground was highly manured, having the last year been occupied by a mound of manure, on which

cucumbers and melons were grown. This was thoroughly incorporated with the garden mould by plowing, and in this potatoes of the common early variety were planted in hills, at the distance of about three feet. Taking a barrel, I sawed it in two in the middle, and placed one half over each hill of potatoes, sinking the rim some two or three inches in the earth; the heads of the barrel of course were out, and the hills were covered in the usual manner by being slightly rounded. When the plants came up, and had attained a height of about ten inches, I filled the half barrels with the same rich mould, merely leaving the tips of the plants in sight. The growth of the plants was most luxuriant, the length of the stems far exceeding those in the same earth near them, and they continued green and flourishing long after the others had ripened and died. At the time of digging, the half barrels were taken away, and the earth carefully removed, without disturbing the stems. Not a trace of a tuber was to be found, except on the shoots below the natural surface of the ground, not differing in this respect, in the least from those around them. The shoots that came out above these, from the main stems, showed no disposition to produce tubers, but reaching the surface, rivalled in vigorous growth the original stems. The yield from the hills was a little more than from those around them, owing perhaps to the longer period of their growth, or the greater supply of nutriment afforded by the additional mould.

Whatever may be the cause, my experiment has not resulted as did De Candolle's, in the formation of tubers above the original or first crop, and would seem to add but little force to the arguments used by some in favor of deep hilling, at the second or latest hoeing. A rich friable earth, in which the roots find sufficient nutriment, and the tubers enlarge at their pleasure, and a covering of sufficient depth at the first, would seem to be about all that is required, with a clean surface, for the production of the potato. H. M. G.



Laborers' Cottages.—[Fig. 9.]

The inconvenience frequently experienced by farmers in boarding laborers, renders the proper construction of cottages a matter of some importance. The English mode of building not being adapted in general to this country, it becomes necessary that we should devise our own plans, and with a view of contributing in a small degree to this object, the accompanying outline is furnished, of a laborer's cottage recently erected.

The dimensions inside are 19 by 21 feet. The walls are built of cobble stone, and are 18 inches in thickness. The building fronts the east, and is built on sloping ground, so that the back part has a bank of earth against it three or four feet in height, and the north-west corner is used as a cellar, the bank being rather the highest at that part. The cellar is about 8 feet square, the bed-room 8 by 11, and the principal room 13 by 19. The eaves are 4 feet above the second floor, and the chamber is divided into two rooms. Cupboards, one in each of the rooms below, are made and set in the wall, which is built round them. They extend about two-thirds of the distance through the wall; as they are surrounded thus by solid masonry, there is no entrance for rats and mice; and as they are even in front with the inside wall of the room, they occupy no space. The cellar being on a level with the principal room, is rendered very convenient for access; and the expense of a separate cellar is thus avoided.

The inside plastering is upon the surface of the stone wall, but in moist climates the wall next the bank should be lathed to prevent too much dampness. The chimney is built in the wall, and some expense in brick thus avoided.

The cost of such a building must depend much upon the convenience of materials. In the present instance, the stone were drawn from adjacent grounds, and a part of the sand obtained on the spot. It was erected however at an unfavorable season of the year, which overbalanced these conveniences. The whole cost, including every thing, was about two hundred and fifty dollars.

Macedon, 12 mo. 1839.

J. J. THOMAS.

#### Weight of a Durham Calf.

MESSRS. EDITORS.—Having seen in your Cultivator of the 20th of November last, that a Mr. Winant Young, of Rensselaer Co. had raised a Durham calf, which when five months old weighed 554 lbs., I was induced to try one that I have raised, and was five months and ten days old, and found him to weigh 575 lbs. I was pleased to see that we can raise as large calves as you folks down east. The mother of my calf is only 30 months old, and girls six feet four inches. I have never

weighed her. I weighed a common cow to-day, (at least of the common breed,) she weighed 1,295 lbs. If Mr. Youngmans will weigh his calf when one year old, I will weigh mine and compare notes. Please give this a place in the Cultivator. JOHN JOHNSTON.

Near Geneva, 7th Dec. 1839.

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ARTICLES.	PRICE CURRENT.			
	New-York, Dec. 20.	Boston, Dec. 20.	Philadelphia, Dec. 17.	Baltimore, Dec. 20.
Beans, white, per bushel, .....	1 25	1 50	1 50	1 50
Beef, per cwt., .....	6 50	7 00	7 00	7 00
Bacon, western, per lb., .....	0 08	0 10	0 09	0 10
Butter, fresh, per lb., .....	0 12	0 13	0 12	0 13
Cheese, per lb., .....	0 08	0 10	0 09	0 10
Cotton, best, per lb., .....	0 11	0 12	0 11	0 12
Flour, best, per lb., .....	0 06	0 07	0 06	0 07
GRAIN.—Wheat, per bushel, .....	1 10	1 15	1 10	1 15
Rye, per bushel, .....	0 70	0 75	0 70	0 75
Oats, per bushel, .....	0 31	0 33	0 31	0 33
Corn, per bushel, .....	0 10	0 11	0 10	0 11
Hams, pork, per cwt., .....	6 50	7 00	6 50	7 00
Pork, in hog, per cwt., .....	2 75	3 00	2 75	3 00
SEEDS.—Red Clover, per bushel, .....	0 55	0 60	0 55	0 60
Timothy, per bushel, .....	0 50	0 55	0 50	0 55
Wool.—Saxony, fleece, per lb., .....	0 37	0 40	0 37	0 40
Merino, per lb., .....	0 30	0 35	0 30	0 35
and common, per lb., .....	0 25	0 30	0 25	0 30
Sheep, per head, .....	2 00	2 50	2 00	2 50
Cows and Calves, each, .....	25 00	30 00	25 00	30 00

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